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THE

Medical Independent,

A MONTHLY REVIEW OF MEDICINE AND SURGERY.

EDITORS.

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ORIGINAL COMMUNICATIONS.

ARTICLE I.—On the Links Connecting the Vegetable and Animal Kingdoms.—*Continued.*

BY HENRY GOADBY, M. D., F. L. S.

Remarkable facts have been revealed by the Microscope of late years, in regard to the reproduction of certain plants; impregnation has been supposed always to take place through the agency of the *pollen cells*, which are known to be conveyed to the other sex, by the agency of the *winds*, by means of insects, and otherwise. It was not supposed that organs were developed in plants, by means of which sexual congress could be established, as pertains to the higher animals, yet such is the fact, and to a much greater extent in regard to number of species, than might have been supposed.

In the lower vegetable organisms (Conferva) generation is accomplished by the actual contact of the sexes—called *Conjugation.* The mode of communication is various, and subject to great modification in the several species of plants subject to this law; in some it consists in the simple development of a narrow neck, or bridge, as it were; others possess a firm exter-

nal envelope, which cannot enter into coalescence with any other; and this membrane *dehisces* more or less completely, so as to separate each of the conjugating cells into two valves. The contents of each cell is thus set free, without any distinct investment, and blend with those of the other; a mass is formed by their union, which acquires a truly membranous envelope —fig. 125.

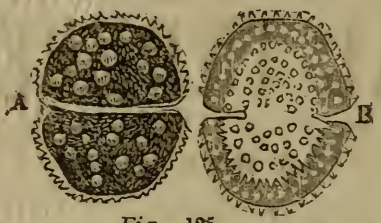

Fig. 125.

Cosmarium botrytis.—A, mature frond; B, empty frond.

This envelope is at first very delicate, and is filled with green granular contents; by degrees the envelope acquires increased thickness, and the contents of the spore-cell become brown or red.

The mode in which conjugation takes place in the filamentous, or confervoid species, is essentially different from the preceding illustration. The filaments firstly separate into the joints severally, of which they are composed; when two cells approach each other in conjugation, the outer cell-well of each splits at that portion which adjoins the other cell, and a new growth takes place, forming a more or less well developed tube of connection—uniting the cavities of the two cells. Fig 126.

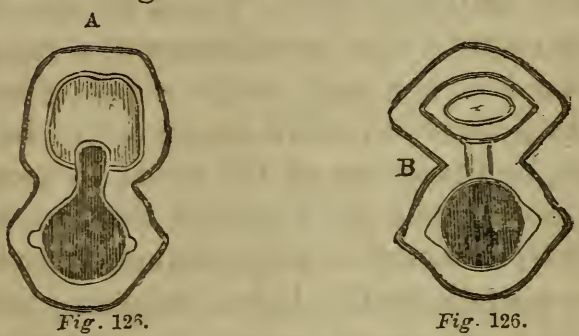

Fig. 126. *Fig.* 126.

Didymoprium Grevillii.—A, two cells in conjugation; B, formation of sporangium.

Through this tube the entire endochrome of one cell passes over into the cavity of the other, and the two are combined so as to form a single mass.

The *Diatomaceæ* are connected by many close affinities with the *Desmidiaceæ*—the class of lowly organized plants to which reference has been made, and hence the majority of naturalists,

at the present day, believe them to be *plants*, notwithstanding the assertion of Ehrenberg, and pertinacity with which he clings to the assertion that they are *animals*.

They are composed of *simple cells*, like the *Desmidiaceæ*, having an external coating which includes a mass of chlorophyll, or endochrome. The chief point of difference between these organisms appears to be that all the Diatoms possess a superficial, external layer of pure silica, more or less covered with external lines, or marks, of varying degree of minuteness, and fineness ; and the endochrome, instead of being of a bright green, is of a yellowish brown. This color appears to be due to the presence of *iron*, which may be detected even in their colorless envelopes.

A more important fact connecting the Diatoms with the Vegetable Kingdom is, that they, in common with the Desmidiaceæ exhibit "conjugation." In *Epithemia turgida*, (fig. 127,) the endochrome of each of the conjugating frustules ap-

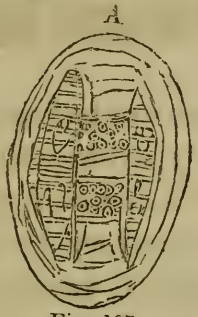

Fig. 127.

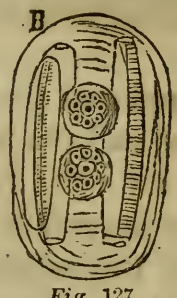

Fig. 127.

A, side view of double conjugation of Epithemia turgida ; B, front view.

pears to divide at the time of its discharge into two halves ; each half coalesces with half of the other endochrome ; and thus two sporangial frustules are formed.

This *double* conjugation seems to be the ordinary type of the process among the Diatoms.

Some of the filamentous species exhibit a remarkable departure from the ordinary plan ; their component cells, instead of conjugating with those of another filament, conjugate with *each other*. The endochrome of certain frustules, after separating as if for the formation of a pair of new cells, moves back from the extremities towards the centre, rapidly increasing in quantity and aggregation into a *sporangial mass*, around which a new envelope is developed, which may or may not resemble the ordinary frustules. For the exposition of this phenomenon see fig. 128, where *A*. represents a simple filament, before any

change has taken place. *B* shows a filament developing sporangia ; *a*, *b*, *c*, successive stages in formation of sporangia.

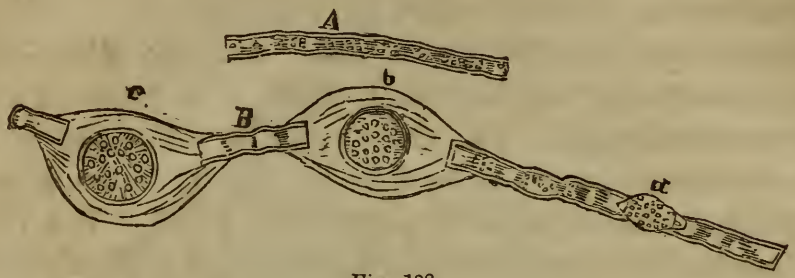

Fig. 128.

It is, however, in the true *Confervaceæ*, amongst the *Desmidiaceæ* that a true sexual generation has been discovered, and which appears to be universal amongst these plants.

It is extremely interesting to trace the several stages through which plants pass, before the completion of the act of sexual congrees. In *Zygnema quininum* the (presumed to be) *first* stage, and here we quote from the authorities, is represented at fig. 129.

Fig. 129

It will be apparent that the cells at the extremity of the figure represent the endochrome as uniformly occupying the greater part of the cell ; the endochrome in the *central* cell, is shown as *twisted* in the middle—a stage preparatory to the condition shown in fig. 130, where a perfectly spiral arrangement of the endochrome has occurred.

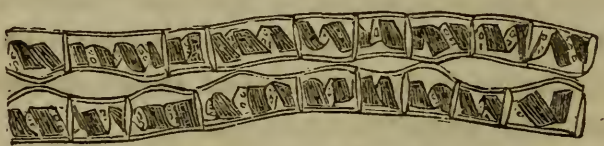

Fig. 130.

It will be seen, moreover, that the cells in the first mentioned figure are greatly extended in length ; but neither is this all : in fig. 130 we find that the filaments are *double*, and connected, the one to the other, by peculiar processes expressly developed for the purpose, and the cells are *greatly reduced in*

Fig. 131.

size. All the cells of the filaments in apposition, take part in the sexual act simultaneously. The third figure of this series,

131, shows a greatly altered condition of the endochrome ; that which was *spiral* in the second figure, has become nearly spherical in the last. The cells are shortened very considerably, and the completion of the act of conjugation is made apparent—the endochrome *having passed from the empty cells* in the *upper* series, to the cells at the lower part of the figure where the sporangia are formed.

Three years and a half back, we collected from the "Grenadier's Pond," Toronto, Canada West, a very beautiful *Zygnema*, in which we believe the whole details are better, and more completely displayed than in the figures we have quoted.

The first process, as represented in our preparation is shewn at fig. 132, where the endochrome appears as a *long, tortuous*

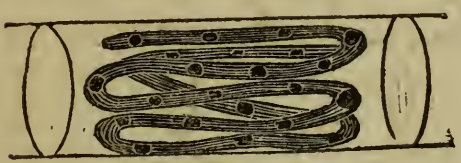

Fig. 132.

Fig. 133.

filament, winding round the inner surface of the cell. In fig. 133 we see the coil gradually approximating, and in 134, it has become *perfectly solid, and cylindrical.* In 135 the mass has made *one twist*, preparatory to the formation of the beautiful

Fig. 134.

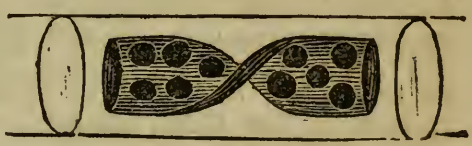

Fig. 135

spiral of the succeeding figure, 136. In this latter state, the cells containing endochrome, have attached themselves, by

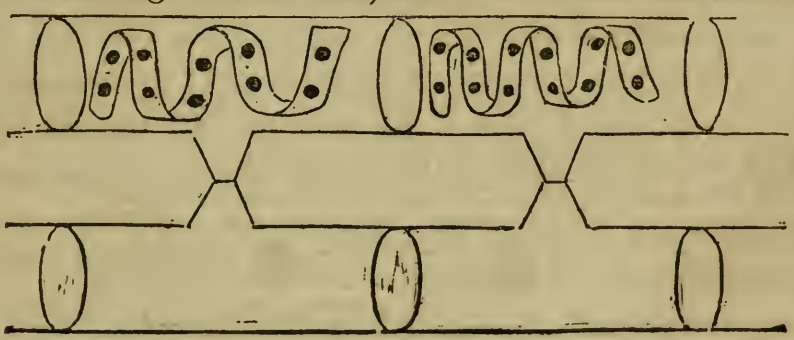

Fig. 136.

means of an imperfectly developed tube, to another filament, the cells of which are empty. Throughout this series of figures the cells are of large size, and the endochrome is constantly nucleated. In the terminal figure, 137, great changes have

occurred ; to enable the endochrome to pass through the (now) *well developed tube* of connection, it has become *perfectly spherical;* the act is complete, for the endochrome has passed from the *empty* to the *full cells* ; lastly the cells themselves are reduced to one-half their normal size. Shortly afterwards, the cells separate, the tubes are absorbed, and the ball of endochrome gradually loosens itself out, simultaneously with the growth of the cell till our first figure be simulated.

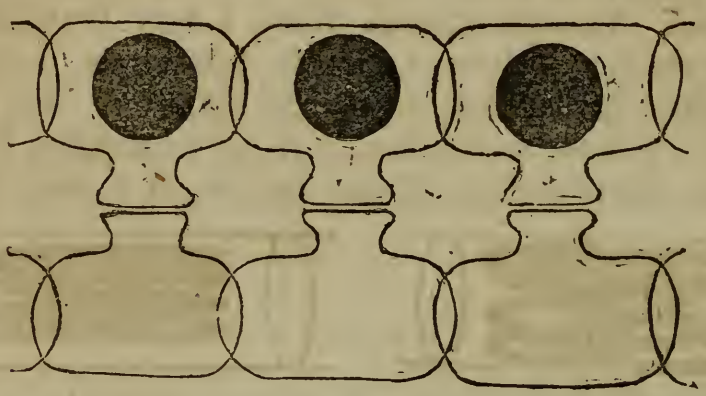

Fig. 137.

In a pond on the island opposite to Toronto, we found the most minute, delicate, and beautiful Conferva we have yet seen ; it was collected, too, at a most fortunate period, as we literally caught Dame Nature in the act of consummating a very interesting process—*the act of conjugation.* It is shown in fig. 138, where it will be seen that the ball of endochrome is tightly wedged in the tube, through which it is gradually passing ; moreover, we learn a new fact in connection with this process, from the present preparation, viz : that the cellulose of which the tube is composed, is *highly elastic,* and although yielding to the attempts of the endochrome to pass from one cell to the other, it yet tightly embraces it in its transit ; this is made manifest by the flattened sides of the endochrome, and the rounded figure of its terminations—above, and below.

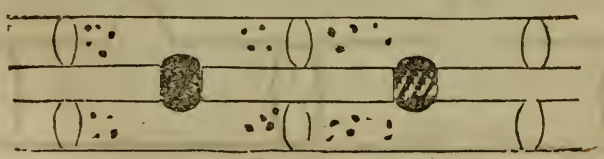

Fig. 138.

This species appears to differ from the other species of Conferva, figured, in this : that *all* the nuclei are not employed in the construction of the fertilizing mass, destined to pass into a female cell ; on the contrary, we perceive that both the male

and female cells possess many nucleated spots. All the circumstances considered, we regard the finding of it, in this particular stage of existence, a happy accident. It is invisible to unassisted vision.

One important circumstance remains to be determined, (so far as we know, not having "Ralfs Desmidiaceæ"); and that is, whether the male cells, emptied of their contents, as we have seen, possess the power to reproduce the endochrome, by which they would be fitted to perform the act of conjugation at a future period; or do they become effête, exhausted, and die off? Our proceedings in this country have hitherto been so remarkably erratic, that we have been unable to prosecute such enquiries, which require *time*, and fixity of position; but we live in hopes, and should the day arrive in which we can say we *have a home*, such enquiries shall be surely answered.

There is yet another, and a curious mode of conjugation, in this order of plants, that remains to be noticed; in *Closterium* the process is somewhat different, as will readily be perceived by consulting the accompanying figure of *Closterium striatolum*, fig. 139, which represents two plants in the act of conjugation.

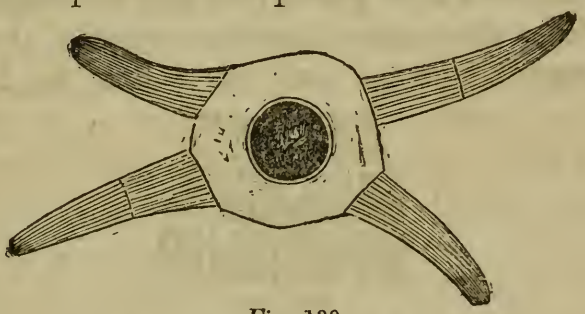

Fig. 139.

It will be obvious that the connecting membrane has been supplied partly by *both* plants, and thus a communication has been found for the transmission of the fertilizing agent.

Our enquiries into the identity of the generative processes of plants, and animals, is not yet complete; in addition to the *actual connexion*, already established, another most important point of parallelism remains to be described. The discovery by Leewenhoeck of (apparently) living animals, or *animalcules*, as they were called, in the seminal secretion of man and animals, opened up a new field for speculation and research. Little was it supposed, at that time, that the fertilizing power of a plant was equally due to the transmission by the male to the female, of a similar ciliated motive organism! Modern discoveries,

aided by the Microscope, have fully demonstrated that such is the case in a vast number of plants, and we shall proceed to lay the evidence. strange as it may seem, before our readers.

In this connection, however, it may be well to premise that many of the *Desmidiaceæ* multiply, as already shown, by the subdivision of their endochrome into a variable number of granular particles, called "gonidia;" these gonidia are frequently found provided with vibratile cilia, and whenever this occurs, they are endowed with the power of locomotion, and in this case they are called "Zoospores." Gonidia are set free by the rupture of the cell-wall which contained them, and each one may develop itself into a perfect cell.

These facts may be satisfactorily ascertained by consulting the phenomena of the development of any of the *Ulvaceous* plants; to this group belongs the grass-green sea-weeds, known commonly as "lavers." These plants multiply by binary subdivision, they remain in firm connection with each other, and form a regular arrangement, and well constituted membranous layer. Each cell is found to exhibit a more or less perfect division into *four* parts, previous to extension by double subdivision; the entire structure generally shows groups of cells, each containing some multiple of four, fig. 140.

Fig. 140.

Most species of *Ulva* have a provision for the extension of the plant by means of "Zoospores;" the subdivided portions of endochrome pass through an aperture in the cell wall, acquire four (or more) cilia, by the vibratile action of which, they swim

Fig. 141.

Fig. 141.

freely through the water. We present a figure of the Zoospores of an Ulvaceous plant—*Phycoseris gigantea;* the Zoosporesare shown provided with cilia (*a*), and the first stage of their development at *b*.—fig. 141.

(TO BE CONTINUED.)

ARTICLE II.—On the Structure and Functions of Insects.—*Continued.*

BY HENRY GOADBY, M. D., F. L. S.

The next skeleton to be considered, in the order of sequence, should be taken from the second Linnean order—Hemiptera. These insects are properly, but vulgarly called, *bugs*, and, from their natural habitat, *Tree-bugs.*

The entire order are *suctorial;* provided with a mouth of specific, and peculiar organization, by means of which they are enabled, firstly to pierce the cortex of plants, and secondly, to possess themselves of the sap, which constitutes their proper and legitimate food. Experience teaches us, however, that whenever any individual of this order comes in contact with an animal, especially man, that they greatly prefer his more nutricious and highly eliminated fluids, to the more legitimate juices of plants.

It is essentially necessary that, whatever be the kind of food these creatures design to consume, they *thoroughly* insalivate it —the reason for this, will appear in a subsequent paper—suffice it for our present purpose to say that to this cause is to be attributed the pain—the invariable concomitant of a bite. A very great number of these creatures are *aquatic*—many of them of great size. The largest known Hemipterous insect—*Belostema grandis*—which measures about two and one-half inches in length, is an inhabitant of the fresh water pools ; the bite of this creature is said to be very severe ; it is found in this country, and presents peculiar charms to the Entomotomist (insect anatomist,) by reason of a peculiar confirmation of its respiratory organs.

No one better knows what may chance to result from a bite of these insects, than the practical Entomologist.

Whilst engaged in collecting, it frequently happens, despite his utmost care and vigilance, that he will be bitten by, either a terrestrial, or aquatic bug, and then he will have to endure a *specific* form of inflamation, depending upon the species that has bitten him, for no two of them agree in this respect.

During our residence in Philadelphia, the son of a friend was one day bitten by *Reduvius;* the consequence was a very painful tumor, as large as a hens-egg, on his forehead, which had be to removed by amputation.

The *Cimex lectularius*, or bed-bug, is said to have been introduced into England, *in the wood* required to rebuild London, after the great fire. It is asserted by Entomologists worthy of credit, that it is indigenous to the south of France, where it has been taken in the woods.

As wood is undoubtedly its natural habitat, it is probable that the same insect may be indigenous in this country.

Two remarkable facts in connection with this order, remain to be noticed, the majority of them are, by far the most *intensely beautiful* of any insects known to us. The colors of many of them, defy alike description, or representation; so beautiful are they, that some ten years ago we mounted one of the most extraordinary we have ever seen—*Tesseratoma amethistina*—in gold, as a brooch, and a more elegant ornament cannot be imagined.

The peculiar and fœtid odor emitted by the *bed-bug*, when irritated, is well known; in this there is nothing specific, all animals, up to man himself, possess odoriferous, or (as they are emphatically called in comparative anatomy,) "stink" glands. The colored races of mankind, as compared with the whites, are conspicuous for the remarkable pungency of their odoriferous glands; by means of these glands, a dog is enabled to track his master, and from the individuality of the secretion, recognize him from every other man. All the *Hemiptera*, if irritated, disclose, not only a very powerful and disagreeable odor, but it is always of precisely the same kind—exactly similar to that of the *bed-bug*, and this constitutes the *second* remarkable fact to which we desire to direct attention. We possess Hemiptera from all parts of the world, many of them distinguished by the possession of pre-eminent beauty, but they all have precisely the same smell; the odoriferous glands of other animals are easily found, but in this class, they have altogether eluded detection.

The present skeleton was obtained from *Halys mucorea*, a beautiful insect common in all collections of Chinese insects. *A*, fig. 11, represents the upper part of the head; it would be vain to expect to find upper and under jaws formed on the same type as those of the beetle, but instead, we find organs which, although analogous, are essentially different in their structure.

a, is the upper lip;

b, the upper jaws, analagous to the mandibles of a beetle ;
c, the under jaws.

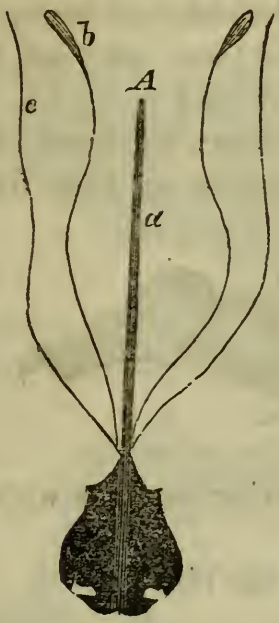

Fig. 11.

Fig. 12.

B, fig. 12, shows the under part of the head which displays the under lip, modified into the form of a tube, consisting of three or four joints, for the reception and protection of the two pairs of jaws seen at *A*.

The jaws, in all the bugs, are merely four fine bristles ; sometimes two of them, and sometimes all four, have enlarged terminations, variously modified, to enable the creatures to cut, or pierce the bark of plants, or the skin of animals. But before this latter operation can be performed, it is essential that the terminal portion of the tube itself be *first inserted;* when this be accomplished, the bristles are thrust out, beyond the tube, to stab the tissue to compel it to yield up its fluid ; when the bristles are again in requisition to *pump up* the fluid, in this wise : place a bed-bug on the back of your hand, allow it to insert its tube, and feed ; whilst thus engaged, carefully examine it with a Coddington lens. The tube is so transparent

Fig. 13.

that it is easy to see through it, and a motion will be plainly seen of the bristles working up and down within the tube, like

the rod of a piston within the barrel of a pump. By this means, the fluid aliment is literally *pumped up.*

The pronotum, a beautiful shield-shaped bone, is shown at *C*, fig. 13 ; it is of large size, the lower part of it being required to cover the four bones, lettered *n*, fig. 15.

The under portion of the prothorax is shown at fig. 14, *D*. It will be seen that the omia are here of very different form from those of Dyticus.

Fig. 14.

j, the omia ;

m, their sides forming articulating surfaces with the pronotum ;

k, the acetabula, (sockets for the hips) ;

l, prosternum.

The most conspicuous and remarkable bone in all these in-

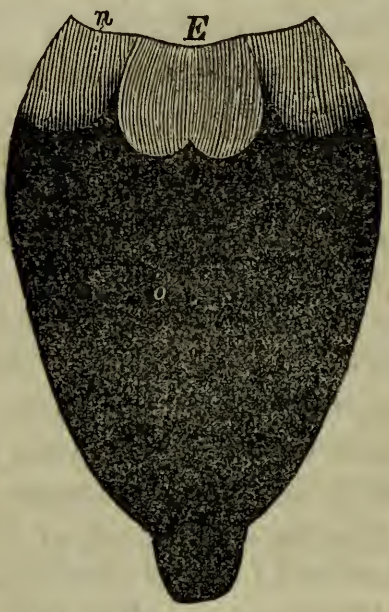

Fig. 15.

sects, as well as the largest in the body, is the mesonotum, fig. 15, *E*. It has been already observed that the bones lettered *n*, are covered by the pronotum ; the remainder of this bone constitutes the *post-scutellum*, which is, in this order, of enormous size—it covers, and entirely conceals the next segment.

The mesosternal segment is shown at fig. 16, *F*.

p, shows the shoulder blades ;

q, the sockets for the legs ;
r, the mesosternum, and
s, the articulating surfaces.

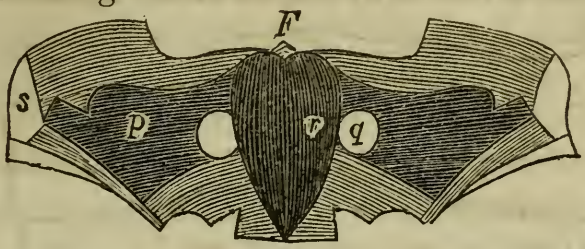

Fig. 16.

The metanotum, fig. 17, *G*, is a beautiful bone, and displays four articulating surfaces, in great perfection.

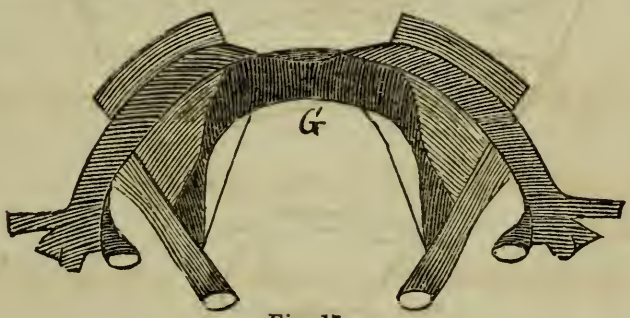

Fig. 17.

The metasternal portion, is shown at fig. 18, *H*.

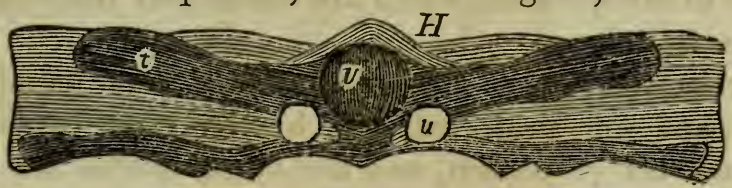

Fig. 18.

t, the omia ; *u*, the acetabula, and *v*, the metasternum.

The articulating surfaces of this bone are largely developed, and well marked.

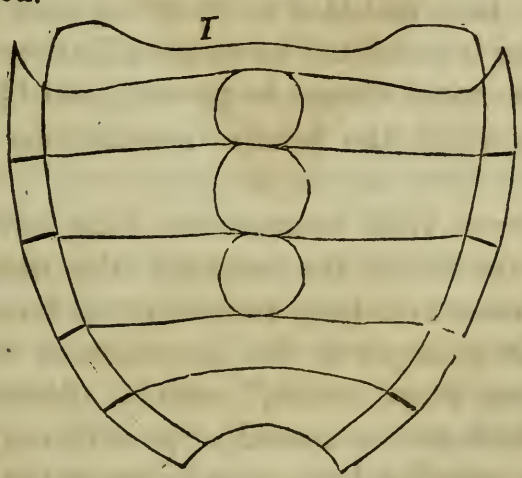

Fig. 19.

The dorso-abdominal segments are shown at *I*, fig. 19.

These are chiefly remarkable for the series of small side bones, which form the articulations with the ventro-abdominal plates.

This latter structure is displayed at *J*, fig. 20. The letter

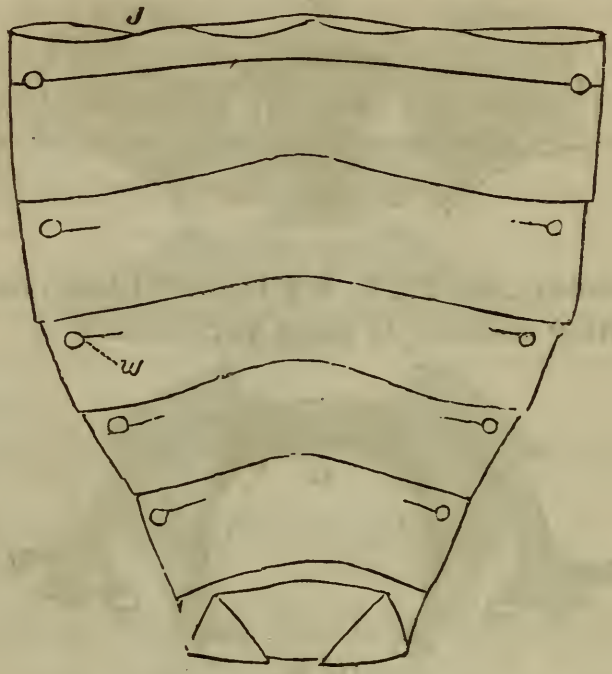

Fig. 20.

w points to the *spiracles*, which are transferred from the dorsal to the ventral plates.

In Dyticus, the dorso-abdominal plates were found to be leathery, and soft, protected, too, by the wing covers ; here there is no such protection, and the dorsal plates are crustaceous. The spiracles, therefore, are transferred to the ventral surface, for superior protection.

The Linnean Hemipterous order contained insects that should not have been included in it, as we shall hereafter see ; but as this Order is restricted by modern Entomology, one important character must *always* be present, and that is the *rostrum* or *beak*, in which the bristles constituting the jaws are contained.

The *Hemelytrum* (half crustaceous wing cover) is by no means always present, on the contrary the wings of a large number of veritable tree-bugs are constructed on a totally different plan. An example of this is to be met with in the so called "seventeen years locust," which, although possessing wings, all of which are composed of a delicately transparent membrane, the superior, being much larger than the inferior pair, is yet strictly *Hemipterous.*

To determine this question, it is only necessary to turn the creature on its back, when, if it be a bug, the peculiar structure of the oral apparatus, lying straight down from the head, between and beyond the first pair of legs, will sufficently identify it, as *no other insect possesses a mouth of this form.*

When it be necessary to use this instrument, it is turned out at right angles to the body, and the height of the legs will generally determine the length of the rostrum, which is exceedingly various. In this position it is easy to insert the end of the tube into the substance, vegetable or animal, that is to be preyed upon. It should seem by the effects produced, that the end of the tube is itself a cutting instrument, allied, probably, to a gun punch.

Some of the aquatic tree bugs, *Notonecta glauca*, especially, are singularly mischievous, destroying an incredible number of insects, merely for the pleasure of killing them. Times and oft, have we collected this species, together with beetles, of all sizes, and aquatic larvæ of several species of insects, and having placed them all in the same jar, have found, to our dismay, on returning home, every thing killed by the *Notonecta*, unless they chanced to be too strong and heavy for them to manage.

We have watched them, and seen the entire operation, in this wise : like other insects, Notonecta, must come to the surface of the water, ever and anon, to respire.

The creature's back is shaped like the keel of a boat, and hence it is commonly known as the *boat-fly;* the abdominal surface is perfectly flat—it swims, therefore with the *back downwards.* Having inhaled an atmosphere, if it chances to see another insect coming up to the surface of the water, with the like object in view, it seizes it in its legs, and descends to the bottom of the vessel, pertinaciously holding its victim till the cessation of its struggles assure the assassin that its death is accomplished.

If the hapless victim be so strong, however, that it can hold out until the boat-fly itself has need to respire, the cunning and cruel insect mounts to the surface, with its prey still firmly clutched between its legs, and adroitly elevating its terminal segments above the water for an instant, effects its object, whilst it takes care to keep its victim submerged. A *second* descent is usually too much, and the poor creature dies asphix-

iated. Liberating the dead carcass, the relentless Notonecta seeks other prey.

It is highly probable, that while the insect is thus firmly held in the embrace of the boat-fly, that the latter sticks his beak into the former, and sucks his blood ; in this case the insect would *die* of loss of blood, and from the poisonous effects of the saliva. Notonecta is common in this country.

(TO BE CONTINUED.)

ARTICLE II.—CHAPTERS FROM AN UNPUBLISHED WORK ON HYGIEINE.—*Chapter II.—Continued.*

BY A. R. T.

"He giveth His beloved sleep."

"To die;—to sleep:—To sleep! perchance to dream!"

SLEEP.—This great restorer of exhausted energies, this refuge of the afflicted, this lovely counterfeit of her stern brother Death, is abused, like all the other good gifts of God. The voluptuary woos her embraces, long after all the innocent of God's creation have sung their matin hymn, that he may have strength to pursue his course of debauchery, which shuns the light of day. The sluggard turns him once more, and yet again, on his soft pillow, while his interests, temporal and eternal are going to ruin ; and the drunkard snores off the fumes of the liquor, which has sunk him below the beasts that perish. Yet, what richer temporal gift has a merciful Creator bestowed on man than sleep ? Abuse, not use, has perverted it.

The number of hours, which should be devoted to sleep, has been a subject of discussion among physiologists all over the civilized world, and it is generally agreed that absolute rules will not apply to all, in regard to this point, any more than in regard to diet or exercise. This seems to be conceded on all hands. *That mental and bodily labor can be pursued with less exhaustion to the system, during the time the sun is above the horizon, than by artificial light.* The stimulus of natural light seems as necessary to the animal as to the vegetable world. The man who turns day into night, and night into day, will soon show the effect of it in a pallid countenance, and failing energies. "Work while it is yet day," say the Scriptures,

metaphorically, and the saying is just as true in a practical sense. Nature has attached a penalty to the violation of her laws, in this instance, as in all others, and it is sure to be enforced. "Early to bed, and early to rise, is the way to be healthy, wealthy, and wise," says Poor Richard, and, like many other of his sayings, it is very true.

The number of hours, proper to be devoted to sleep, varies according to the age, temperament, occupation, and health of the individual. Children and youths require much more sleep than the adult and middle-aged, and when the advance of years begins to sap the energies, failing nature requires more sleep to restore the decreasing strength. Persons, who have arrived at the age of three-score and ten, often sleep from fifteen to eighteen hours in the twenty-four. It would appear, at first sight, that the laborer would require more sleep than the literary man, of sedentary habits; this, however, is not so; head-work is more exhausting to the nervous system than hand-work, and the muscles will rest sooner than the brain. Other things being equal, the student requires most sleep. But whatever may be the length of time devoted to sleep, he who values health and long life, should rise early.

A few words in regard to beds and bedding. It is too much the custom in our country to use feathers, as a material for beds and pillows. This is, without doubt, wrong. Feathers confine and accumulate the heat of the body, and, although they may be borne in winter, are utterly inadmissible in summer. Persons accustomed to sleeping on feathers, from childhood, are not aware how much more comfortable a harder and cooler bed is. Let a person accustomed to hair matresses and pillows, attempt to sleep, even for a single night, on a feather-bed, and he will, probably, lie awake for the best part of it, and get up in the morning, feverish and unrefreshed. For sheets, the best material is linen, of not too fine a texture. The wadded cotton coverings, commonly called comforters, in this country, are open to the same objections, as are feather-beds; they are too warm; changes, to meet moderate variations of temperature, cannot be made with them; blankets, although more expensive, are much better. Children, especially in hot weather, are very apt to throw off the bed clothes, and thus take cold; the best preventive for this, is a night-dress of flan-

nel or cotton, made in the form of waist and drawers joined. The temperature of bed-rooms in the winter is a matter of much importance, and there is a great variety of opinion, in regard to that most conducive to health. Where a house is warmed by a furnace, the temperature of a bed-room may be regulated so as to vary very little from the time of retiring until morning; but where stoves, or open fires are used, there must necessarily be considerable cooling before morning, and, of course, a liability to take cold. As a general rule for persons in good health, cool bed-rooms will be better than warm ones. Their ventilation will be hereafter spoken of, in the appropriate place.

Itinerant lecturers on *hygieine* have, of late years, much recommended the practice of sleeping in rooms with an open window, at all seasons of the year. For persons engaged in the ordinary pursuits of life, such a practice would, in most cases, prove highly injurious, and, so far from adding to the robustness of the individual, would probably entail an endless succession of colds and rheumatisms. In a chamber of decent size, sufficient ventilation can be had without it.

The shortest period which can be safely appropriated to sleep, by the man in health, whatever may be his occupation, appears to be from five to six hours, and few are willing or able to get along with less than this. The man who is diligent, during his waking hours, need not consider himself a sluggard, if he devotes eight hours, out of the twenty-four, to sleep.

Ventilation and warming of houses are subjects of paramount importance, in an economical, as well as a hygieinic point of view. Fuel is abundant and cheap in our country, but yet it forms an important item in the expenses of every family at the north. The cooking stove has greatly decreased the consumption of fuel in the kitchen. In place of the wide chimney, with half a cord of wood blazing in it, and a whirlwind rushing up its throat, there is the neat stove, burning a few small billets, boiling, baking, roasting, and frying, all in the compass of a few cubic feet, and with an economy and convenience unheard-of a few years ago. This is all very well, but it is to feared that the modern stove is not without some serious objections, on the score of health, when considered as a means of warming. It is hardly possible to state all the ob-

jections to the stoves now generally in use, without going into a consideration of some of the doctrines of the conduction and radiation of heat, which would be quite incompatible with the plan of an essay like this. A compend like the present must rather state results than reasons. I shall endeavor to lay down a few rules for the employment of stoves, founded not only on theoretical deductions from the known laws of heat, but from considerable experience and observation on the subject. Three general rules should be observed in the use of stoves for warming apartments. First, the stove should present a large surface to the air of the apartment; as the air is heated, not by radiation, but by actual contact and circulation. A small stove, highly heated, is not only less economical than a large one, heated to a more moderate temperature, but less wholesome. The intense radiation from a highly heated stove dries the skin, contracts the capillary vessels, and throws an additional burden on the lungs, while the air of the room is *comparatively* little heated. Second, the plates of the stove should be thick; in this way sudden variations of temperature by the decay of the fire will be, in a measure, guarded against. Third, the stove should be so constructed that the draft of air can be accurately regulated. Good dry wood will consume slowly with a very small quantity of air, and, in this way, supply the greatest possible amount of heat; as very little is carried off in the shape of hot air and steam, up the chimney; while, when the draft is strong, by far the greatest portion of the heat is lost in that way. The Russians have large *brick* stoves, which are never heated to a high temperature, and are only supplied with fuel twice or three times a day, and by these means, an uniform temperature, adequate to resist their rigorous climate, is easily maintained. Our Canadian neighbors, long ago discovered the practical use of large stoves, with thick plates; they are constructed with two stories, and the genial temperature diffuse by them is quite a different thing from the fierce and stifling heat of a little red-hot spit-fire of a stove. Another disadvantage of a stove very highly heated, is that the dust, which always more or less floats in the air of an apartment, is burnt, and makes a disagreeable smell.

Fire-places and grates, for burning wood and coal, are less economical than stoves, but the ventilation afforded by them is

more complete than that made by stoves, unless in the latter case, a seperate plan for ventilation is adopted. Houses should never be built without flues and fire-places for all the rooms, even when stoves are to be used, for by them can ventilation most easily be accomplished. Where stoves are employed for warming, ventilation may be most easily accomplished, by an opening into the chimney, near the ceiling; this, in general, will be quite sufficient. As to the various complicated and expensive plans for ventilating dwelling-houses, and public buildings, they are beyond the scope of a work like this; but, two general rules may be safely adopted: first, admit your cool air, at a height not greater than four feet from the floor, and make your escapes for the heated and foul air as high as possible.

As to the temperature of rooms, some little variation may be necessary to meet the feelings of those employed in different avocations. To the man who has been for hours taking active exercise in the open air, in winter, that temperature will appear suffocating, which to the sedentary man, the in-door mechanic, and the sepmstress is only comfortable. Seventy degrees of Fahrnheit's thermometer is as high an artificial temperature as should generally be employed, and one a few degrees lower will be found comfortable, by those who are much in the open air.

CHAPTER III.

Diet, &c.—As from the stomach, and the other associate digestive organs, proceeds the food or nourishment of the blood, and as from the blood are formed all solid and fluid constituents of the human body, so it is obvious, that good food and a healthy digestion are indispensible for the production of a healthy body. In all parts of our happy land, abundance of good food is procurable, and that within the reach of all who will take the moderate pains necessary to earn it. But it seems as if, in proportion to the abundance and excellence of the staple articles of food, cookery becomes bad. In our country, where the time devoted to meals is generally so very short, it is peculiarly necessary that good cookery should step in as an auxiliary to our overtasked stomachs. By good cookery, I am far from mean-

ing the preparation of rich and highly seasoned dishes ; these should be eschewed by all who have any regard to their health or comfort ; but I mean that preparation of food, which fits it for easy and painless conversion, first into Chyme, and then into Chyle. There is a happy medium between food so unskilfully cooked as to be, for hours, an incubus on the stomach, lying like a bad deed on the awakened conscience, and food so skilfully cooked and elaborated as to do away with the process of mastication. Mastication and the accompanying secretion of saliva are as necessary to good and easy digestion, as is any other of the processes usually looked on as contributing to that end. This is one reason why soups are generally hard of digestion. Our teeth were made to be used, and few persons are aware how many ill consequences to the general health arise from neglect and abuse of them. I have already briefly treated of the means most likely to preserve these important organs. Man is most clearly pointed out by his dentition and digestive organs, as an animal intended by the great Creator to live on a mixed animal and vegetable diet, and while this is undoubtedly the diet best fitted to sustain, in their fullest health, both his bodily and mental functions, yet such is his adaptability to circumstances, that he will live and thrive on either an exclusively animal, or an exclusively vegetable diet ; and such consummate wisdom and goodness have been displayed, in adapting the productions of the earth to man's peculiar wants, in different regions, that the most unobservant cannot fail to be struck by it. In cold inhospitable regions, man needs most animal food, and that of a fatty kind, and consequently the continents, seas and rivers, of the extreme north, teem with animal life. Witness the countless herds of Caribou, or Reindeer, which overrun the so-called barren grounds of North America, the whales, walruses, and seals of the Greenland and other actic seas, the innumerable sea fowl, enveloped in a coating of fat, and the myriads of delicious fish which almost block up the Siberian and other rivers of the far north.

In temperate regions animal and vegetable productions are more nearly balanced ; and why ? because by the alternations of the seasons a mixed diet is rendered necessary, aud we may here further trace the same adaptation ; animal food, which is most necessary to man in cold weather, is, in the winter, in the

best condition to be eaten, fattest and most tender, and the converse is true in regard to vegetables in the summer, when their abundance and variety furnish a bland, grateful and cooling nourishment at a time when animal food becomes comparatively distasteful. On arriving in tropical regions, we find that the quantity and variety of vegetable food is vastly greater than that of animal food. The birds, fish, and quadrupeds of the tropics, are comparatively coarse and unpalatable, while nature spreads her banquet of delicious vegetables and fruit in rich and boundless profusion. The Rice, the Maize, the Plantain, the Manioc, the Sweet potato, the Cocoa-nut, and other species of Palm, the Chocolate-nut or Cacao, (called, by Linnæus, Theobroma, or Food for the Gods,) and an almost endless variety of delicious and wholesome fruits invite man to invigorate his fainting frame, by their bland and unstimulating nourishment, and cool his heated blood with their acidulous and refreshing juices. Thus, in every region, nature points out to man, and holds ready for his acceptance that food most suitable to keep his body in health, and fit him for the purposes of his being.

These four general propositions might be laid down in regard to diet.

1st. That the inhabitants of cold climates require more animal and fatty food than those of hot climates.*

2d. That in regard to the inhabitants of temperate climates, more animal food is required in winter than in summer.

3d. That, (climate being the same), those who take violent exercise need more animal food than the sedentary.

4th. That all other things being equal, adults need more animal food than children.

The principles and premises, from which these propositions have been drawn, are too extended and intricate for such a work as this, it must suffice, that the conclusions have been arived at by the most eminent modern physiologists, and cultivators of animal chemistry. There are almost infinite varieties in the dietetic rules adapted to different constitutions and circumstances, but with good common sense and judgment, any one can, by a few simple rules, regulate his manner of living so

* Our distinguished countryman, and voyager in the Arctic Seas, Dr. Kane, has borne the strongest testimony to the truth of this proposition, Fat seal and walrus meat in abundance, (better when raw and bloody than when cooked,) enabled him and his men to bid defiance to fatigue, cold and scurvy.

as to avoid that dire scourge of our country, Dyspepsia, and it shall be the object of the writer, in this portion of the work, to point out those simple rules.

The foundation of all correct dietetics is to avoid excess in all things. Without this precaution all other rules are of no use. The physician may give his best advice, and the apothecary administer his choicest drugs to the glutton, or the intemperate, and it will be a mere patching up of a leaky kettle, a prolonging of the ultimate catastrophe, when the whole shall get beyond the reach of the tinker's art. No more food should be taken than can be disposed of without oppression or pain, and it is often of great importance to refrain from eating heartily, when the frame is worn out with fatigue. Under such circumstances the digestive organs partake of the general exhaustion of the system, and are not equal to grapple with a full meal. A cup of tea or coffee, and a piece of bread should be taken, and the hearty meal deferred until rest has recruited the frame. These remarks more particularly refer to accidental severe exertion in those unaccustomed to it. The hardy day-laborer, the farmer, the mechanic, the sailor and the hunter are inured to toil, and their food will invigorate instead of depressing them, after the labors of the day are over ; but let the usually sedentary man beware of a full meal after violent exercise.

Another very important part of Dietetics is to adapt the diet to the age and constitution. The young require a less amount of animal and stimulating food than adults ; and the sedentary man less than the active man. The man inclined to be fat should avoid fat meats and a large amount of vegetable nutriment, his diet should rather consist of lean animal food and a small amount of nourishment in a small bulk, and the man of delicate stomach should avoid all rich and luxurious dishes.

All men are more or less self deceivers, and I will venture te say that no one who has had the command of abundance of wholesome, well cooked, and nutritive food ever ruined his digestion, unless he wilfully shut his eyes to some imprudence he has been in the frequent habit of committing. I now speak of extreme cases, for there are many instances of dyspepsia, in a moderate degree, which seem unavoidable and dependent on causes beyond the control of the sufferer. I

would not wish a healthy man to be always looking for "*death in the pot,*" such a state of mind would, of course, conduce to disease, but I do say that a moderate care in respect to quantity and quality, and times and seasons of eating, would save many a one from years of suffering. If oppression in breathing, a sense of chilliness, or drowsiness, and especially if all these combined, follow a meal, you may be sure that you have transgressed the bounds temperance and moderation, and that repetition of these transgressions, continued for any considerable length of time, will result in more or less disease of the digestive organs. I again repeat, that each man's experience, carefully applied, will soon teach him how to avoid a system of diet which is injurious, either as to quantity or quality. These remarks are intended principally for those who are still in a tolerable state of health. For the confirmed dyspeptic, the only resort is the skilful physician, for the mind in this disease, while appaarently perfectly healthy on all other subjects, often soon becomes incapable of judging correctly on any thing connected with the bodily ailment. I could relate numberless instances of the strange measures resorted to for relief by those suffering from this disease ;* so called—and the quantities of medicines poured into their unfortunate carcasses would almost exceed the bounds of the bounds of the largest credulity.

ARTICLE IV.—Mr. B. Seguard's Theory of the Physiology and Functions of the Medulla Spinalis, and its Nerves: from the Lectures of Mr. C. Bernard, Professor of Experimental Physiology in the College of France, at Paris—Winter of 1856–57

Mr. Brown Seguard has created, among the scientific men of Europe, and especially of France, an immense sensation, by his new theory of the functions of the spinal cord.

Mr. Claude Bernard, Professor of Experimental Physiology in the College of France, at Paris, has taken, as the subject of his lectures, this winter, the Physiology of the Nervous System. He is one of the most prominent physiologists of Eu-

* I mean to intimate that many distinct diseases of the digestive organs are often grouped under the name of Dyspepsia.

rope, and his opinion will, therefore, be of great value on this most important matter. I intend a regular attendance upon his course of lectures, and when he arrives at the physiology of the spinal cord, I will send you his views in relation to Mr. B. Seguard's discovery.

In the mean time, a summary of the most striking points of a report just made to the Biological Society of Paris, by Doctor Broca, on M. Seguard's discovery, will be of some interest to your readers, that society having admitted the truth of the new theory on the spinal marrow.

When Charles Bell communicated to the Royal Society of London his first researches on the functions of the spinal nerves, the physiology of the nervous system entered a new era. Previously it was a common opinion that the spinal cord was nothing but a large nerve manifesting conjointly with the different nerves of the body, its action on the sensibility and motion of the limbs. This was the only exact notion of the properties of the nervous system. There were, indeed, many other confused ideas among physicians, such as the one originating with Galen, who taught that the spinal cord was divided into two parts, each part having under its control the corresponding limbs. The decussation of the anterior pyramids discovered by Mistichelli, was sufficient to account for the cases in which it happened, that paralysis was seen in one part of the body, when the disease existed in a different part of the brain.

There was, as we see, no science proper, which merited the name of physiology of the nervous system, and it was impossible to explain those facts of daily occurrence in which were observed, at the same time, and sometimes separately, the appearance of sensibility and motion, those two great properties of the nerves. Bell's discovery was, therefore, hailed with enthusiasm everywhere.

This great genius, guided by a few dissections, and by numerous experiments on animals, ascertained that the diverse functions of the nerves arose from the diversity of their origin in the spinal cord or in the encephalon. He found that the posterior roots of the spinal cord gave sensibility to the limbs, and that the anterior ones were the agents of the contraction of the muscles. This simple discovery was by itself a revolution in physiology, and was sufficient to immortalize its author.

But the human mind is prone to systems, it cannot follow patiently the results of observation, and must substitute for reality, the delusive deductions of theory. It very seldom occurs that discoverers can refrain from generalizing, and the erection of systems. Thus it happened with Charles Bell—not satisfied with having discovered the properties of the anterior and posterior roots of the nerves of the spinal cord, he deduced from them a whole theory on the functions of the medulla. He saw the connection of the posterior roots with the posterior columns of the cord, and concluded, from that fact, that those columns were the agents of sensibility. He observed the connection of the anterior roots with the anterior and lateral columns, and arrived at the conclusion that those columns were the conductors of motion.

This double conclusion seemed very natural, indeed; it wanted, however, the sanction which experiments alone can give, in science; but, unhappily, Bell had an instinctive abhorrence of experiments on living animals, he made few beyond those upon which his theory was constructed. As those experiments had not given him exact facts in sufficient number to enlighten his mind, it was merely from deductions that he erected his theory of the different properties and functions of the spinal cord.

We have thus given a general idea of the doctrine of Bell, as it was presented by him and his partizans to the world. As soon as Bell's discovery was announced, the whole body of physiologists and anatomists was aroused; innumerable experiments were made in all countries. Magendie, Herbert, Mayo, Fodera, De Schœps, Bellingeri, and others were among the first to repeat the experiments of the English discoverer.

The functions of the posterior and anterior roots were generally admitted as true, but the case was far different in relation to his theory of the spinal marrow. Let us report a few results obtained by physiologists on that subject. In some cases it happened that men of high standing in science, were of the opinion that the motor functions were uniformly disseminated in all the columns of the spinal cord, the gray matter being the only agent of sensibility. In other cases, the posterior columns were admitted to have under their influence the contraction of the extensor muscles, when the anterior and lateral col-

umns controlled the flexor muscles. It was even found, by some, that each column was indistinctly sensible and motor, but that the posterior one was usually more sensible than the anterior, which was generally motor.

Baker discovered that sensibility and motion were at the same time destroyed by a section of the posterior columns. De Schœps, by the same experiment, i. e., a section of the posterior columns, noticed that motion was destroyed and sensibility preserved in the limbs. Fodera, on a section of one posterior column alone, witnessed a crossing paralysis of sensibility, and a direct paralysis of movement. The results we have reported with a large number of others, too numerous for detail in the limits of this article, did not explain the matter, and many physiologists lost all hope of arriving at a certain conclusion as to the functions of the spinal cord, repeating Boerhave's celebrated sentiment, "*quis dicet hoc movet, hoc sentit.*"?

The subject remained in this undecided state, when Longet began his study of the physiology of the nervous system. This gentleman, convinced that experiments always performed in the same manner, must invariably give the same results, put to himself the simple question, why have so many different notions arisen on the same subject? The answer to that question was, that among many difficulties inherent to the study, the most important one was the section of each column seperately, and the impossibility, in many cases, of distinguishing movements produced by the direct excitation of the spinal cord, from those produced by the pain resulting from the opening of the vertebral canal.

According to Longet's opinion, the simple opening of the vertebral column, the simple contact of air with the exterior surface of the *dura mater*, were sufficient to diminish the nervous action of the posterior part of the body of the animals on which that operation was made, in such a manner that it was almost, if not altogether, impossible to observe either motion or sensibility. M. Longet was thus brought to the conclusion that the results obtained by the previous experiments of physiologists could not be relied upon.

Instead of a partial, he made an entire section of the spinal cord, and obtained by it an absolute paralysis of the posterior limbs. He then applied electricity, first to the cervical or cen-

tral segment of the medulla, and secondly, to the caudal segment. He examined also in succession, and seperately the posterior and anterior columns and the gray matter. This mode of operating gave constantly uniform results ; let us see what they were.

Galvanizing the posterior columns, he found that they had no influence on the contraction of the muscles. That the galvanization of the anterior and lateral columns produced no sign of pain or sensibility whatever. That galvanism applied to the central segment of the posterior column excited excessive sensibility. That the same agent applied to the caudal segment was productive of a very sensible motion—and finally, that electricity applied to the grey matter had no effect on the body of the animal undergoing experiments.

Made in this manner, experiments on the spinal cord always gave similar results, and Charles Bell's thecry, thus completed and modified by Longet, was adopted as truth, and seemed beyond criticism. It was thought, for a time, that this part of the physiology of the nervous system had arrived at perfection. The defective origin of the new doctrine was completely forgotten, as well as the objections to which it had given rise, objections, however, which did not appear unfounded. Facts contradicting the doctrines were put aside, and all experiments, the results of which conflicted with this theory, were reputed imperfect ones. More fortunate than a thousand of other theories, this became classical, and at this day it is so universally known that an analysis of it is hardly necessary—but I give one for convenience of reference.

The spinal cord is at the same time a nervous centre, enjoying a proper activity, and a conductor destined to put in communication with the encephalon all the systems of the body. It owes these peculiar properties to the two matters which enter into its composition. Phenomena of centrality, especially reflex actions, are dependant on the grey matter, which is itself entirely deprived of sensibility or motion. The white substance of the spinal cord is nothing but the conductor of all the impressions of the body ; the posterior columns being conductors of sensible impressions, and the anterior ones conducting the motor impressions. Such, in few words, is the received theory of the medulla ; it is simple and captivating ; we have been taught it, and have taught it to others.

To-day we are bound to confess that it is any thing but true. That M. Brown Seguard has completely overthrown it, by his discovery of the properties of the spinal cord. Again, we are convinced that theories, however admirable they appear, are of little value, unless founded on postive observations.

M. Brown Seguard has been experimenting on the functions of the spinal cord for a long period. It is now more than six years since he published his first researches. At different times he has performed before us, experiments, the results of which were entirely contradictory to the admitted notions of the properties of the medulla. But Charles Bell's doctrine was so universally received among the physiologists, that those results were hardly noticed. This neglect, however, did not discourage M. Seguard. He continued his experiments, varying them *ad infinitum.* He made them in a form which left no basis for objections ; and, having lately returned from America, he deemed the moment had arrived for presenting to the scientific public the results of his experiments.

His first communication to the Biological Society excited intense interest. He bodly stated that the section of the posterior columns, those columns which were believed to be sensitive, far from annihilating sensibility in the posterior limbs, brought an exaggerated sensibility. That on irritating the caudal segment of the spinal cord the pain experienced was far superior to that excited by irritation of the cephalic segment, contrary to the theory which gave to the latter the function of conducting the impressions.

These results were so contradictory to all our notions, that we determined not to be taken by surprise. We, therefore, engaged M. Seguard to repeat that fundamental experiment. He complied with our desire, and performed the operation of cutting the posterior columns of the spinal cord in two rabbits. The result confirmed his declaration. Still, doubts existed in our mind. We thought he might not have made an entire section of the posterior columns, which are small and of difficult dissection in rabbits. We requested him to operate on some larger animals, such as the sheep, dog, or horse. He kindly acceded to our request, and those experiments and the results observed, we proceeded to report. F. G.

Paris, January, 1857.

(TO BE CONTINUED.)

ARTICLE V.—Fibrous Tumors of the Uterus—A Case—Extirpation by Incision, and Complete Recovery.

Few departments of pthaology, perhaps, have given rise to a greater amount of solicitude, have elicited more perseverance and ingenuity in research, and have been crowned with more satisfactory results, than that which pertains to the uterus and its appendages. Perhaps, too, but few organs or combinations of organs are amenable to a greater variety of pathological abnormities. Among these, the production of morbid growths, their influence, not only, upon the organs and functions, implicated, but upon the economy, at large, and the therapeutical measures, required for their cure, or, the surgical appliances, that their extirpation demands, are not the least important. Generally, they are designated by the terms, tumor, and polypus—they are, also, denominated fibrous tumors, tubercles, mucous tubercles, vascular polypi, &c., &c. Perhaps, a nomenclature, that would present, to the mind of the investigator, as little complexity and embarrassment as any, would be the following, viz : let polypus be the generic term, and the growths, or morbid products, intended to be expressed thereby, be designated by an expressive qualifying appellative, distinctly indicating some obvious predominant characteristic. For example, if structure be adopted as the basis of distinction, let those that present the appropriate anatomical characteristics be denominated fibrous, fibro-cartilaginous, &c., and such as exhibit a marked mucous structure, i. e., evidences of being constituted, entirely or chiefly of the mucous tissue of the uterus, or of analogus structure, have the appellative, *mucous*, attached, while those which offer a musular or fleshy organization, might be defined by the qualifying or descriptive term, muscular or sarcomatous. Thus, the entire catalogue of known abnormal products, might be specifically expressed according to actual organization. We are induced to offer these suggestions, from the consideration, that much confusion, manifestly exists, in the language, used by different writers on these subjects. One will treat of polypus, evidently meaning to include, under this head, all, or most of the morbid growths, that are found within the cavity of the uterus, or attached to the parieties of the vagina. Another will speak of fleshy tubercle and of polypus, without defining, with much care, the distinctive

characters, either of one or the other. Again, *tumors* of the *uterus*, and *polypus*, neither being so definitely described, as to enable the student to distinguish, without much labor and embarrassment, what precise structure is represented by either, are spoken of by systematic authors. Still further, fibrous, and fibro-cartilaginous, mucus tumors, and vascular polypi are expressions, that occupy a conspicuous place, in the department of professional literature, which treats of the abnormal products, of which, we are speaking. Now, if we rightly comprehend the subject, these several epithets, strictly construed, mean nearly, if not exactly, the same thing, or a class of pathological products, and we can but feel that the progress of science is, in no small degree, retarded by the use of such various terms, expressive of the same, or quite analogous growths, or morbid organizations.

There is, not only much embarrassment to the practitioner, induced by this manifest indefiniteness, in the use of technical phraseology, in diagnosis, but like embarrassment results, as regards treatment. Definiteness, in the use of appellatives is indispensable, both as regards diagnosis and practice ; for, although no intelligent practitioner will prescribe to a *name*, yet, as the genius of technical language is to convey, so far as disease is concerned, the idea of a pathological condition, or an abnormal state of some structure, organ or function, the mind is aided and guided, thereby, in no inconsiderable degree, in distinguishing the character of the disease, under investigation and in selecting the means of cure.

By fibrous and fibro-cartilaginous *uterine tumors*, then, we mean a variety of polypus, that presents certain and definite anatomical characteristics ; by muscular, fleshy or sarcomatous tumors of the same organ, we would designate morbid growths, of a remarkably different description, anatomically, and yet, nothing more nor less than another variety of polypus. We have deemed it incumbent, thus to digress from the main purpose of our paper, with the hope of attaching more of explicitness to this class of the morbid products, peculiar to the female organs of generation. Fibrous tumors of the uterus are found to vary, as regards the precise tissue, whence they originate, and consequently, the precise locality in which they are to be met with. They are to be found on the external, or peretoneal as-

pect of the organ, originating in the cellular tissue or in the uterine parieties, beneath that membrane ; shooting out from it and occupying the cavity of the pelvis, in common with the uterus and the urinary vescicle. In this situation, they are likely to induce a conviction of ovarian disease, of some kind, and give rise to a necessity for extirpation, by abdominal section. They also embarrass, mechanically, or impede materially the processes of micturition and defecation. Occurring, as they frequently do, in the unmarried, by the alteration in form, which follows, errors of the gravest kind are liable to be committed, and the reputation of the most lovely and the most virtuous, ruined, and their peace destroyed, as in the example so graphically and pathetically reported by the astute Professor of Obstetrics and the Diseases of Women and Children, in the University of New York. Of this variety, perhaps one of the most interesting, both as regards treatment and its results, to be found in the records of our science, is that reported in the American Journal of the Medical Sciences, by Dr. W. L. Atlee, of Lancaster, Pa., for April 1845. Another, of still more formidable character, and involving both the uterus and its appendages, so entirely as to render their complete extirpation necessary, is reported by Dr. Baker, of Knoxville, Tenn., in the January number of the Southern Journal of the Medical and Physical Sciences. The operation was made on the 13th of November, 1856, and terminated in complete recovery, the patient being discharged, cured, on the 3d of January following. They are found located, also, between the muscular laminæ of the uterus, or deeply imbeded in the substance of its parieties. In this situation, if they attain to considerable size, they may shoot up into the cavity of the abdomen, giving rise to the same conviction and the same proceedure as in the former instance, or into the lower section of the pelvis, protruding into, and distending the cavity of the uterus ; the particular direction of the propagation, depending, perhaps, upon the near proximity of their origin to one or other of the uterine surfaces, and by consequence, the less or greater resistance, from the involving muscular tissue. With neither of these varieties is regularity of the menstrual function, incompatible, although it may be rendered irregular, and ultimately, entirely suspended. Of this, however, we shall have occasion to

speak again. Nor is pregnancy incompatible with these pathological abnormities. We met an example of this latter variety in an athletic woman, in the spring of 1838. A fœtus at, or near full uterine period, had been expelled and the placenta delivered. Expulsive efforts, however, were still continued, and the practitioner, from what presented to the touch, hoped, soon, to have the satisfaction of relieving his patient entirely, by the delivery of another child. In this, he was disappointed, and after an interval of twenty-four hours, our presence was desired, in consultation. Examination revealed a tumor, occupying the entire superior strait, and of much more ample dimensions than the head of a large child. It was firmly impacted, apparently, in the superior strait, dense and unyielding. Contrary from what is generally true, there was but little flooding. Uterine efforts were continued, with varying energy, during three days, from the time of our visit, when, notwithstanding the use of anodynes and nourishing food, the patient sank, from exhaustion, and a post-mortem examination brought to light the true nature of the case. Of this description, we do not doubt, was the case, reported by Dr. Power, in the December number of this journal.

Again, they are found, (and these it is believed, are of most frequent occurrence,) located on the internal surface of the uterus; generally beneath the mucous lining, but slightly attached to the muscular parietes and easily disengaged, or, having changed and appropriated the primitively enveloping mucous coat, are firmly adherent to the muscular structure of the organ. In the former example, the whole mass, after a section of the investing membranous tissue, may be removed, by enucliation, as in the case reported by Mr. Teal, in the Medical Times and Gazette, for August, 1853. In the latter, this is impracticable, and extirpation is to be accomplished, either by ligature or excision. Of this latter variety, was the case soon to be related. In examples of this description, the menstrual function may or may not be morbidly implicated. Often it continues normal, for a long time, or each successive recurrence may be slightly augmented, in quantity. Hæmorrhage may or may not be an attendant—at times it is of fearful portent. Generally, however, it is believed, extended observation will confirm the suggestion just offered, that, in the greatest

number of cases, it (the menstrual function,) is not materially altered, while the general tone of the system continues at a healthy standard. In regard to hæmorrhage, we have the sanction of learned authority for the conclusion that it is, in those examples of fibrous tumors of the uterus, in which they occupy the fundus of the organ, or the body, and are imbeded in its substance, that this symptom or consequence, more commonly occurs. In the first and last varieties, and if the tumor be located near the cervix, or quite remote from the fundus, it is a remarkably less frequent accompanyment.

With this last variety, pregnancy, if not incompatible, is, perhaps, not a common event. That it does, occasionally occur, is not only established by observation, but confirmed by authority, and there may be much of truth in the declaration that, "when they—the tumors—occupy the body of the uterus, they do not present an obsticle to impregnation." Among the consequences operated upon the action of the uterus, when pregnancy does occur, is abortion, and in most examples, flooding, of a grave character afterwards, from inability of the organ to contract. Even a repetition of pregnancies may characterize cases of this kind. Summarily, it may be said, in the language of an able writer, in reference to the uterus, itself, and its functions, that "the mechanical obstacles, occasioned by fibrous tumors, may be divided into four kinds. First, retention of the catam enia from obstruction of the cervix or os uteri ; second, sterility, from the same cause and from obstruction of the fallopian tubes ; third, abortion, from impeded development of the uterus, during pregnancy ; and fourth, difficult parturition, when the tumor, situated at the servix or os uteri, has become sufficiently large to obstruct, or prevent the passage of the child." Indeed, perhaps it is especially, during, or soon after delivery, when pregnancy is complicated with this variety of morbid product, that the most hazardous consequences, are likely to follow, and such cases, observes an experienced writer, "are not absolutely of rare occurrence." Dangerous or fatal peretonitis, rupture of the uterus, exhaustion, from protracted labor and long continued and violent, yet ineffectual expulsive efforts, and uncontrollable flooding, though delivery have not been accomplished, are the chief causes of fatality, under these circumstances. Examples of a fatal termination, from each of the conditions, just referred to, will be

found detailed by systematic writers, and reported, from time to time, in the periodical literature of our science.—Above, we have alluded to the case, reported by Power, at page 219 of this journal, in which death was produced by rupture of the uterus. Often, as the case progresses, and as the uterus becomes distended by the augmenting tumor, constitutional symptoms, somewhat analogous to those of pregnancy, manifest themselves. Even, in certain examples, "the mammary sympathies have been much excited and the breasts have been swollen." Other constitutional disturbances, aside, perhaps, from such as are dependent upon functional derangements, are not common, until an advanced stage of their progress, when the assimilative and nutritive functions, becoming implicated, emaciation, greater or less, as the stage and the extent, to which the functions, just mentioned, are involved, is a necessary accompaniment. Generally speaking, their progress is tardy, in a remarkable degree—"months may elapse, without apparent increase, and years, without the slightest inconvenience, except such as have been already referred to as of a mechanical character." There may be one, only, or many of these tumors, and they may be of various sizes, and exhibit different stages of advancement. So, also, the same tumor, in different parts, may, and often does, present widely different conditions of organization. One portion may be characterized by fully developed muscular fibre, with vessels, conveying red blood, while another, puts on evidences of more recent production, being white, consisting of dense fibrilated or fibrilating fibrine, and not yet of sufficient age, or maturity of structure, to allow the circulation of red globules. An interesting feature of these abnormal growths is, that they are not characterized by a disposition to take on ulcerative action, nor to degenerate into a malignant form of disease, though they may, and not unfrequently do occur, in constitutions of an obvious cancerous diathesis. Their occurrence prior to puberty is found to be rare, though Bayle alleges, they are oftenest met with, in females, in whom evidencies of virginity are found. He also affirms, that in twenty of one hundred women, indiscriminately selected, after the middle period of life, the fibrous tumor, more or less developed, will be found, imbedded in the walls of the uterus. Commonly, as the tumor or tumors enlarge, and as the

uterus becomes distended, efforts are induced to cast off the offending body; hence pains or contractions simulating those of labor, at intervals, and often, of marked severity, are a prominent characteristic. Indeed, these are, not unfrequently the phenomena, that first bring the case under professional supervision.

As regards diagnosis, it is sufficient to observe, that, in most examples, it is not only obscure, but remarkably difficult. Even examination, per vaginum, fails to reveal, with certainty, the exact nature of the case—often to excite suspicion, until the os uteri, being dilated, the tumor is discovered, either by the touch or through the aid of the speculum, to be lodged in its cavity, or having escaped, is found in the vagina. Moreover, if symptoms be assumed, as the basis of conclusion, it will be found that most of them are equivocal; inasmuch as nearly all may arise from other causes or conditions of the reproductive organs.

While speaking of diagnosis, we would not forget to observe, that, when the tumor originates beneath the the mucous lining of the uterus, or under a thin lamina of the muscular coat, is located near the fundus, and when it has attained considerable size, it may, from its weight, be productive of inversion of that organ. This offers an exceedingly embarrassing complexity and makes the diagnosis singularly difficult. It may be true, likewise, that, though inversion may not have taken place, nevertheless, the the tumor and the inner surface of the uterus being covered by the same membrane, it may be mistaken for that morbid condition, and it is not improbable, as suggested by reliable authority, that many of the cases of amputation of the uterus, reported from time to time, have been of this kind. None can question, then, the necessity of great care, in the examination of this description of morbid growths, nor of much caution in their diagnosis. Nor is it less a duty to observe, that, in the first variety mentioned, if the tumor be attached to the exterior surface, or originating between the muscular layers of the uterus, it propagates itself into the cavity of the pelvis, it may, when it has acquired considerable size, give rise to retroversion of the organ, again complicating both diagnosis and treatment.

But there is another feature of this abnormity, having refer-

ence to *prognosis*, which merits more than a passing remark. The practitioner will always be enquired of, if there is not much danger of this disease reproducing itself, at no distant period, notwithstanding extirpation may have been successfully accomplished. Impressed by an apprehension that such an event is to be expected certain highly qualified therapeutists have advised the application of nitrate of silver, to the radical after the removal of the tumor, in the hope that it would effectually prevent the dreaded recurrence. We are not aware, however, that the recommendation has ever been brought to a practical test, and it is believed that the suggestion has its origin, in theory, founded on inference, rather than on intelligent observation of the results of such proceedure, in analogous cases. Fortunately, too, we believe extended research will confirm the declaration of Clement, Puzos, and others, "*that the root of the polypus, which remains, never grows, again, after the general mass of the tumor, has been removed.*" We regard this deduction, from experience, as of great value, both to the practioner and the patient, since it enables the former to impart encouragement with a good degree of confidence, and thus, inspires the latter with an assurance of hope, which cannot fail to influence, beneficially, the final result.

Having dwelt, thus, at length on the principal facts, that belong to this class of morbid uterine growths, we proceed to report our case, whose history, treatment and result, together with the microscopical character of the tumor, are as follows: On the 20th of October, last, Mrs. J., aged nearly forty-seven, and her youngest child, being 16 years old, was attacked with severe abdominal pains, recurring at intervals of ten to fifteen minutes, and accompanied, as she believed, with copious flooding.

This state of things continuing, notwithstanding recumbency and the use of certain domestic treatment, at about 1 o'clock P. M., we were hastily summoned to her aid. We found her suffering, as stated above, and obtained the following account of her condition for some months preceding. She was of industrious habits, and had been engaged, as usual, in the cares of her household, though latterly, with less than accustomed energy. Her appetite had not been good during the summer, and her catamenial periods had been of unusually frequent occur-

rence, and greatly augmented in quantity. These disarrangements she had attributed to the change, in this important function, incident to her period of life, and, therefore, were regarded as of no special consequence. While she had not been conscious of any existing disease, she had found herself gradually declining in flesh and strength, and her rest had not been as refreshing as common. Observing the character of her pains, during this brief historical statement, we were forcibly struck with their likeness to those of abortion, or even of labor at full time, and asked permission, after a few hasty enquiries, to examine the condition of the abdomen, which was readily granted. This revealed a uterine tumor of the ordinary size of the gravid uterus, at the fifth or sixth month. Her attention was was immediately called to the fact, by enquiring if she had suspected pregnancy, to which she answered negatively; and further, while she had observed that, within a few weeks, her clothes had been tighter than usual, she had not been aware of the tumor, to which her attention had just been directed, nor had she suffered any of the sympathetic influences, which, on all former occassions, were present, when she was pregnant. She was informed that she *was* pregnant, or, that some *morbid product* occupied the the cavity of the womb, and a doubt was expressed, whether, if pregnant, the product might not be anormal—a false conception—a mole, or a hydatid, &c. It was soon ascertained, too, that what she represented as serious flooding, was a copious discharge of a seroid fluid, but slightly tinged with blood. The pulse, though somewhat feeble, was of normal frequency, and, in no sense, indicative of approaching exhaustion. All things considered, it was concluded, whatever the contents of the uterus, the indication was, to quiet, and wait for further developments. No particular circumstance, at this time, seeming to call for an examination, per vaginum, rest was enjoined, and an anodyne prescribed. At evening, she was found more comfortable, the opiate having allayed nervous irritability, of which, there had been considerable, and greatly mitigated the pain. The next morning, she reported a satisfactory night's repose, was refreshed and quite free from suffering. The anodyne was repeated, and, the bowels, having been rather torpid, a laxative was advised, which acted, in the course of the day. She passed a comfortable night, and was soo-

able to be about her house, in a state of general health, quite as comfortable as before. On dismissing her, she was requested to examine her sensations, to determine, whether there were any, even the remotest indications of quickening; what the mammary sympathies, &c., &c.

From this time, she passed on, quite as well as prior to the attack above described, till the the 12th of November, when we were again desired to see her in some haste. Obeying the call, immediately, we found her in a condition, quite similar to that of the former occasion—pain, however, was more severe, and recurring at shorter intervals, and, if there was a difference, the watery discharge was more abundant. Now, it was deemed advisable to examine, per vaginum. This only tended to confirm the prior diagnosis—the neck of the uterus seemed quite obliterated, and the os, closely agglutinated. In short, no indication presented, save such as characterized impregnation, of about six months standing. As already remarked, the former diagnosis was confirmed; the same indications of treatment offered, the same course was pursued, and the same result followed. At this time, she informed me, she was convinced of pregnancy. She was quite confident she had been able to recognize obscure motion, the breasts were quite tumid, and the areola of deeper tinge, than natural, in the unimpregnated state. Rest and anodynes, having quieted the disturbance, she was soon able to resume the supervision of her household though with less of personal comfort, than during the former intervals, till the 28th of the same month, when the phenomena, before described, were reproduced in a greatly exagerated degree. Again, requested to visit Mrs. J. in haste, we found, in addition to exagerated pain, that the vaginal discharge had undergone considerable change, assuming a sanious aspect, putting on a remarkably offensive odor, indicating that some body or product was in process of decomposition. The uterine efforts were affirmed to be more severe than she had ever endured, in parturition; the pulse was small and weak, and general strength had somewhat declined. For the present, the treatment, previously pursued was advised, with the addition of a vaginal injection of solution of chloride of lime. She had a tolerably comfortable night, and, during the 29th, suffered much less than the day previous, and the discharge

was considerably abridged. On the morning of the 30th, pains of an urgently expulsive character recurred, and indications were present, as far as could be inferred, without a vaginal examination, that a speedy termination of the case, by the expulsion of the contents of the uterus, of whatever kind, would take place. Examination, per vaginum, revealed the presence of a body, quite in the vicinity of the vulva, of an oval shape, and as large as a child's head, of medium size. We soon convinced ourselves that it was an abnormal product, of some kind, and sought to bring it down, but our efforts were ineffectual. At this stage it was found impracticable to reach the os uteri, and, therefore, to determine, with certainty, whether it was one thing or another—an imperfectly developed product of conception, or a tumor, attached to some portion of the uterus. With a view to accomplish as much towards expulsion and unquestioned diagnosis by the efforts of the uterus alone, as possible, ergot was administered.

This produced its customary effects, and efforts to grasp it with the hand and bring it down, were repeated. Failing in this, the forceps were applied, and, by their aid, without the least augmentation of pain, we soon succeeded in bringing it exterior to the vulva. Now, for the first time, the os uteri could be felt, at its right ilio-pubic aspect, but could not be reached, at any other point, nor could attachment be distinctly made out, although we had no doubt of its true character. Convinced of the difficulty of our case, and the responsibility attendant, we proposed counsel, leaving the choice to the patient, when Dr. M. Stewart was invited. Meantime, however, an additional portion of ergot had been administered, and further tractile efforts had been made, which had been, in a degree, effectual in bringing both the tumor and the uterus into a favorable position for examination. On his arrival, after hearing a history of the case, an examination, enabled him, with considerable difficulty, to find an attachment, at the right ilio-pubic aspect of the os, and about half an inch within its margin. After consultation, it was concluded to bring it down, as far as possible, and apply a ligature. At the suggestion of a near relative of the family, Dr. J. A. Brown was called in, who, aided by a detail of the main features of the case, and an examination, concurred, both in the diagnosis and in the proposed treatment.

Other engagements pressing, and, as there was no flooding, nor urgent symptoms of any kind, requiring haste, it was proposed to postpone farther treatment, till a given hour. On meeting, at the stipulated time, it was found that the friends had deemed it well to have the advice of Dr. Pitcher, whose name, among others, we had proposed in the first instance. He soon arrived, when, after examination and consultion, it was concluded to bring the tumor down, to the lowest practicable point, and extirpate, by incision. For this purpose, a fillet was applied around the protruding portion, by the aid of which, in the hands of Dr. Brown, the other prefessional friends kindly aiding, by their encouragements—we were enabled to bring the tumor, and with it, the uterus, to a point, so low, that we could explore and trace, in a measure, satisfactorily, the extent of its attachment. We have already stated that it was found adherent to the right ilio-public aspect of the os, and a little within its margin. From this point, it continued, by a broad base, up the side of the uterus, across the entire breadth of the fundus, and thence, along the opposite, or sacro-iscaiatic aspect, to within about an inch or an inch and a half of the os, in that direction. A short distance from the surface of the uterus, either from intrinsic conformation, or from the the tension, operated by the tractile force, applied, its dimensions were contracted to about the size of the wrist. Here, we resolved to sever it, and the operation was accomplished in the following manner: The common round edged scalapel was chosen, as the most convenient instrument, the blade of which, to the distance of about one-third of an inch from its point, was securely wrapped in a fillet. Then, passing the thumb and index finger of the wright hand along the vagina, and towards the sacral aspect of the tumor, with the scalpel so grasped between them, as to have the back rest on the finger, presenting the edge upward and inclining toward the tumor, and likewise passing the index finger of the left hand immediately beneath the pubis and above the tumor, to a position directly over the point of the instrument, with a repetition of cautious movements of the knife upward, and making it meet the finger of the left hand, at each time, thereby, effectually guarding all parts, except the tumor, from injury, it was soon detached, and our patient, and all present, relieved. The operation gave rise

to no pain, evincing the complete insensibility of the part, and throughout the whole proceedure, there was scarcely a gill of blood lost, and that little oozed from the pendulous portion, in the course of the handlings during the day. The patient was put to bed, the binder was applied, with a moderate degree of tightness, an anodyne administered, and in all other respects, she was treated as we are accustomed to treat, after child-birth. She was kept under supervision, till the 25th of Dec., when, no untward symptom having occurred, and physical strength being satisfactorily restored, she was dismissed, cured. Since that time, she is quite confident she has had one normal catamenial period, but it has not been repeated. We saw her a few days since, and were informed that she scarcely has in recollection, a period of the same length, when she has enjoyed firmer health, than since the date last referred to, and, certainly, judging from her appearance, we readily credit her report.

The tumor was eleven inches in circumference, at its largest portion, and its length was ten inches. We cannot declare its weight, as it was not convenient to weigh it, for some time after extirpation. We are indebted to our colleague, Dr. Goadby, for the microscopical examination of its structure, who declares that the "colored portion," which constituted about two-thirds of the whole mass, "clearly demonstrated that it was a *simple fibrous tumor*," and that "the examination of its interior, and every portion of the red structure, only confirmed this truth." "The colorless portion," which was the superior third, was "equally fibrous, but there was this striking difference—the colorless part of the tumor displayed *only colorless corpuscles.* The necessary inference is, that the colored portion was *older* and had become organized, whilst the *newer colorless* part retained the primitive type of structure."

Detroit, February, 1857. K.

Caustic in Nævus.—

Dr. Macke recommends the following caustic as a highly useful application to naevi materni, especially in young children. Corrosive sublimate 4, collodion 30 parts. It is to be applied with a small brush, and desiccation takes place so rapidly that the action of the caustic does not extend beyond the spots it is applied to. A solid eschar, one or two lines in depth, falls off in from three to six days, and the pain induced is inconsiderable, and of short duaation.—*Revue Med.*, 1856.

ARTICLE VI—Supurative Arthirtis—Recovery without Anchylosis, with Illustrative Cases.

BY H. WATSON, M. D.

Editors of the Medical Independent:—In the July number of the *Peninsular Jour. of Med.*, I noticed a communication on the possibility of the preservation of the joint in supurative arthritis. Two of the cases there related occurred to patients in a puerperal state, and as the author admits, even not very well marked, consequently any inferences from them, not absolutely conclusive. The third case was different, and not liable to the objection, and its history reminded me very forcibly of two cases which fell under my own observation.

In March, 1826, George Wells, a healthy farmer boy, about fourteen years of age, wounded his knee slightly, with an axe, and by advice of a man calling himself a physician, the wound was dressed by applying a piece of salt fat pork to it, confining it with a bandage. Some six days afterwards, I found him suffering with a severe pain in the knee, and a violent sympathetic fever; the whole joint was hot, very much swollen, and shining like a glass bottle. On removing the dressing and attempting to flex the limb a little, a stream of sero-purulent matter issued from the wound, as nearly as I can recollect, a full teacup-ful. Dressing the wound with a plaster of simple cerate, I covered the whole joint with a large blister, enveloping the limb for six inches above and below the knee with a thick bran poultice, opiates were administered freely, and such nourishmer t as he could be induced to take. Under this treatment he became more comfortable, but the purulent discharge continued to be very copious for more than a month, averaging each day a half a pint or more of thick yellow pus. On examination with a probe, there was no difficulty in passing it through the joint and several inches in other directions; the constitutional symptoms were proportionably severe. Restlessness, chills, colliquative sweats, and emaciation which ultimately became alarming, were combatted with opiates, astringents, quinine, cordials and animal broths. After two or three weeks had elapsed, granulations could be discovered in the lips of the wound, which at length became prominent, protruding like a fungus—the discharge of pus, however, diminishing in propor-

tion to their growth. These changes were accompanied with a gradual subsidence of the hectic, and I had the satisfaction of seeing him fully restored to health in eight or ten weeks after I first took charge of him. The protruding granulations were easily repressed and the sinuses up and down the limb were gradually obliterated by the application of compresses. While this process of granulation was going on, I every day flexed and extended the limb, thus giving some motion to the joint, and enjoined upon the attendants to do the same occasionally in my absence. For several months the joint was less flexible than before the injury, but by use, at length this stiffness was overcome, and so far as comfort or use is concerned, the limb is as perfect as the other. There is, however, some deformity apparent to the eye, a deep depression exists where the wound was, with a corrugation of the skin, owing, doubtless, to the absorption of the fleshy parts and an adhesion of the skin to the bone.

The second case occurred in Springfield, Massachusetts. In the winter of 1847, I was requested to meet Dr. S——, of that city, in a case of acute rheumatism, as the messenger informed me. On my arrival, I found the patient, a fine little boy of about seven years of age, in a perfect frenzy of excitement from pain and spmpathetic fever, the countenance expressed the most intense suffering, he was bathed in sweat, which actually dropped from his face and hair, the pulse counted 140, and was sharp and wirey; his parents informed me that he had not slept five minutes at any one time, and had not been moved from the posture he was then in, for more than four days, and that any attempts to move him produced such dreadful screams that they were obliged to desist. On raising the sheet, which was thrown lightly over the limb, I found the leg flexed some fifteen or twenty degrees on the thigh, and the whole limb from the ancle to the hip very much swollen, end about the knee a good deal discolored and shining. On inquiring if there had been any injury, the parents denied any knowledge of an accident, but the little patient himself at once told me that while playing with his mate in the street, he had fallen and struck his knee on a small stone, which hurt him so severely that he was scarcely able to get home. Very little attention seems to have been paid to his complaints, although the servants said that after the accident he wholly refused to use the limb, and no physician

was called until four or five days after. Dr. S. pronounced it a case of acute rheumatism, which he said was then prevalent in the city, advised a covering of pelisse wadding and the use of Tinct. Actia and camphorated Tinct. Opium, equal parts, in small doses, regularly. This plan of treatment was continued till I saw him some five or six days later. On examination I could find no evidence of supuration at that time sufficient to warrant an opening, but had little doubt there would be soon. I persuaded Dr. S. to combine with his treatment the use of enough sulphate of morphine, to allay the excessive sympathetic irritation and pain, so that he might have some sleep, and to apply blisters and poultices to the affected limb. Springfield being about sixteen miles from my residence, I stayed through the night with the fam ily, and was gratified to see the little fellow sleep several hours in comparative ease, and I left him in the morning, lying upon a fresh, clean bed, with a calm countenance and a pulse of 110 in a minute. After this I saw the patient only once in four or five days—Dr. Smith, of Springfield, (afterwards lost in the Norwalk catastrophe) having been associated with the attending physician in prescribing for the case. An opening was made into the joint a few days after, and there was a copious discharge of pus and sanies for several weeks, extensivs sinuses formed above and below the joint, dissecting the muscles, and requiring openings in various places, and the poor little sufferer became almost a skeleton under the exhausting effects of the discharge, and the accompanying hectic. It at length became a question with the other physicians, whether a removal of the limb would not be necessary for the preservation of his life, and at their request an eminent professor of Anatomy and Surgery in one of our large Universities, was invited so see him in consultation; he said there was extensive disorganization of the joint, an absorption of the cartilages, and probably caries of the femur and perhaps of the tibia, he thought his life in great danger under any treatment—recovery with anchylosis the best possible event, the preservation of life at the expense of his limb, would in his opinion be a very fortunate termination. Conversing with the parents I found them very unwilling to allow an amputation—my own opinion about the ultimate result was less unfavorable, and I was very well satisfied to trust the case to time, soothing topical applications,

and the liberal use of wine. cordials, anodynes and food—the event justified my anticipations, the local symptoms became less severe, the constitutional affection gradually subsided. One after another the abscesses and sinuses in the limb healed, at least in part, and he recovered his flesh and strength pretty rapidly. Instead of anchylosis the mobility of the joint was preserved imperfectly, as the leg could be flexed on the thigh to a right angle and extended so as to form an angle of 135 or 140 degrees without causing much pain. By persevering efforts the use of the joint was materially increased, and although he has never acquired the power of making the limb quite straight, he now walks without a staff or any other support and can flex that limb perfectly as the other. Considerable deformity is apparent about the knee upon inspection, and there are still some openings above the knee surrounded with callous edges, through which a little thin ichor escapes, and several little spicula of bone have passed out at these openings.

What the morbid changes were which took place in this case, it is probably not possible to determine with accuracy, but that the whole joint was for several weeks in a high state of high inflammation, involving the synovial lining and the cartilages, seems to be very apparent. I have long been of the opinion that by a proper course of treatment and especially by the persevering use of motion of the joint, at the proper time, anchylosis may commonly be avoided, at least in a considerable proportion of cases of supurative arthirtis.

Detroit, January, 1857.

Chloroform in Croup.

M. Passavant relates some trials that he had begun to make with chloroform in croup. He had observed that in pnuemonia, under the influence of this agent when inhaled, the viscid expectoration was discharged, enveloped, as it were, in a liquid exudation, and from that fact he hoped, by the use of chloroform, to be enabled to facilitate the detachment of the false membrane, in croup. At intervals of greater or less length, chloroform was inspired for about ten minutes. The result was surprising. Strips of false membrane, many centimetres in length, were expectorated with violent efforts at coughing These observations, however, are not sufficiently numerous to enable him to decide definitively on the value of this treatment. It cannot yet be determined whether it merely favors the expulsion of the exuded membrane, or exercises a favorable influence on the mass of the blood. It is probable that it has no action on the swelling of the larynx in which tracheotomy is indicated.—*Archiv. Physiol. Heilk.—N. O. Med. and Surg. Jour.*

SPIRIT OF THE MEDICAL PRESS.

TREATMENT OF NEURALGIA BY THE VALERIANATE OF AMMONIA. BY DR. DECLAT.

We have prepared an abstract of an interesting translation from the Revue Med. and Etrangue, which may be found in a late number of the Medical Examiner, as it brings to our notice a new remedy, which may be of value in the treatment of a class of diseases increasing in frequency and oftentimes obstinate in their persistency. According to Dr. Declat, such cases will yield to the influence of valerianate of ammonia; and as a proof of his statement, he gives the following cases:

Case I. The Marchioness of Fontanelle suffered with facial neuralgia for six years, first appearing as she was cutting a wisdom tooth. Legrand and Jobart (de Lamballe) ordered its extraction, which was done, causing agonizing pain. The neuralgia still continued in spite of every effort of such advisers as Sedillot, Velpeau and Jobart. Quinine, opium, belladonna, strychnia, iron, gold and quinquina were employed, and external applications, such as blisters, opium plasters, dulcamara, chloroform, collodin, aconite, &c. Everything failed. Jobart applied the actual cautery along the course of the inferior maxillary nerve, and after applying the waters of Plombierre with partial though temporary relief, the Marchioness applies to Dr. Declat.

The first remedy used was fowler's solution, which was pushed until it produced constitutional symptoms, without success. The patient had become almost insane from the agony, when an experiment was made with valerianate af ammonia, on the 3d of January. A teaspoonful that night relieved partialy and two teaspoonfuls the next day, entirely banished the pain. The medicine was discontiuued May 6th. Occasionally, however, Mad. Ferrand has "slight twinges," but resorts to the specific, and always successfully. This lady seems to have a hereditary right to neuralgia, her mother having been a great victim to the disease, whilst her brother, the Earl of Essex, has had ticdoloreux from his youth.

Case II. M. Letellier, who had suffered horribly with pain in the head extending to the neck, and losing itself on the branches of the facial nerve, was at Plombierre's when taken, and returned to Paris in great agony. Dr. Louis tried blisters, sage, quinine and morphia without any effect. He used morphia to such excess as to remain in stupor almost constantly. Dr. Declat administered the valerianate of ammonia in drachm doses, twice a day. In five days he was up, and in nine days all pain had passed away. He has since stated that his cure was complete.—*Phila. Med. & Sur. Journal.*

Application of Ice to the Os Uteri in Cases of Uterine Hœmorrhage.

Prof. D. W. Brickell in an article on Placenta Prævia, in the November No. of the New Orleans Medical News, speaks in the following language: "In my intercourse with medical men I have heard the application of ice to the os uteri, in cases of dangerous flooding, condemned as rash, unnecessary, and unsafe; but such condemnation has only been expressed by those who have never used it. I can only say, that I have now resorted to the remedy four times—in every instance successfully—and so prompt has been the relief, that I can not help regarding it as a true sheet anchor in such cases. I have never been able to theorize myself into the belief of its dangerous tendencies. It is altogether probable that the continued application of ice to the os or internal surface of the uterus, would be productive of serious consequences, but not so with its transient application. We apply ice to the abdomen to arouse the dormant energies of the uterus; in ordinary cases the susceptibility of the uterus to impressions directed through the sentient nerves of the skin, is active, and the organ contracts; but in another case, the skin will not serve as a medium of impression, the peril is imminent, and the organ must be reached more directly; there is no time for waiting on ergot, brandy, &c.; the stimulus of the bare hand in the uterine cavity is not sufficient; but a lump of ice carried quickly to or within the os, and in a moment withdrawn, will meet the indication and save life. So far from apprehending danger from its use, I have seen such prompt relief afforded, that I should henceforward be more inclined to rely on the application of ice to the *vagnia*, than to the abdomen in ordinary cases of hœmorrhage."

Large Ovarian Tumor Removed by Dr. Dunlap, of Ripley, Ohio.

On Friday, the 16th of December, ult., Prof. R. D. Mussey exhibited an ovarian tumor to the class of the Miami Medical College, which was removed on the 18th, by Dr. Dunlap, of Ripley, Ohio. The solid tumor weighed 100 lbs.; and besides this, some five pounds of fluid were lost in the operation. This is, perhaps, the largest ovarian tumor ever extracted from the living subject. The patient, after the operation, did not weigh more than the tumor removed! She was doing well on the 20th—we have heard no subsequent report.—*Cincinnati Med. Observer.*

EDITORIAL AND MISCELLANY.

"PROPOSED REMOVAL OF THE MEDICAL DEPARTMENT OF THE UNIVERSITY."

Such is the caption of an article appearing in the Febuarry No. of the *Peninsular Journal*, which, though anonymous, we may reasonable accept as the lucubrations of the senior editor of that Journal. Its purport is a vindication of what the writer terms "the *Prusso Michigan System of Public Instruction*," in which he attempts to show that a removal of the medical department to this city would destroy the *symetrical proportions* of a system of universal education "borrowed from our *Teutonic* rivals in education." The learned senior, as it seems, was prompted to offer this exhibition of his logical acumen, by an article which appeared in our January issue, in which we presented some thoughts upon the same subject. We are exceedingly gratified, therefore, that we have been able to generate an excito-motory influence, sufficient to call forth even an attempt at argumentative reasoning in support of objections urged against a removal of the medical department. Eminating from such a source, it must be considered as the most *profound logic* that can be made available in staying a ruthless hand put forth to disturb the unity, harmony and integrity of a system which requires *a new coinage* in nomenclature for an appropriate cognomen. To say the least, it is an improvement on all former articles from the same pen, inasmuch as the greater part of it is within the comprehension of all who will make the attempt to read it. Unfortunately, however, for the moral force of the whole, the first paragraph contains a statement which bears the impress of the vindicative spirit that gave it expression. Its first allegation is that, "*the Medical Independent was designed, from its inception, to establish a claim to popular regard by assailing the University.*" Now, the author of this assumption *may* be honest in his convictions, and, inasmuch as he so often "sins through ignorance," and, so long as the allegation is perfectly harmless, we shall exercise a good degree of forbearance, attributing the error to a perverted brain, rather than a disorder of the heart. We are not at all surprised to find this allegation, the leading proposition in the elaborate effort, for it is

perfectly consonant, with the puerility that characterises the mind which gave it a conception. The strongest point which such a mind could make would be to falsify our position, *impugn our motives*, and leave the main issue to specious sophistry. But our position with regard to the University has been too well defined and understood to be compromised to any alarming degree, by such a wilful perversion of truth.

The author of the article seems to be very much disturbed on account of our allusion to the Prussian origin of our educational system, "*placing it before the public eye in such a light as to lead to the belief that it is a recent exotic, and not a naturalized plant, genial to the soil of a healthy and vigorous growth.*"

We have had to hear a great deal, from time to time, about the great "*Prussian System*," upon which our system of education has been founded, but hereafter it must be known as the "*Prusso Michigan System.*" No one will object to this compound cognomen, for if our State has failed to carry into successful operation, a system "borrowed from our *Teutonic* rivals in education," the fault is not in the *system*, but in its practical adaptation to the educational interests of the State. It is only proper, therefore, if the *system has* failed, to indicate the place *where it failed.*

BOSTON MED. LIBRARY AUG 2 1889

Now let us see how this "Prusso Michigan" system is working, then we shall be better able to appreciate the propriety of this change of cognomen. The writer tells us that this "system consisted in the harmonious blending of the three degrees of education, found in the common schools, the Gymnasium, or elevated academy, and the University, wherein the highest degree of instruction is communicated, and that this whole system is under the supervision of an officer of State, entitled the Superintendent of Public Instruction."

He would have his readers believe that the three degrees of education —the common schools, the academy, and the University—are blended and working in unity and integrity; ergo, to remove the medical department of the University to this city would destroy the beautiful symetry of the "Prusso Michigan System." But a very brief history of the *facts*, in relation to the *harmonious blending* of these departments of education in our State, as they now exist, obtained from our able Superintendent of Public Instruction, leaves nothing for the argument of the writer, save the embelishments of his pedantry. His conclusions would be more legitimate if his premises were *true.*

How does he dispose of the stubborn fact that the academies of the State are not only independent of the University, but have already become formidable rivals in successful competition for its highest honors? From whence came a strong opposition which was well nigh successful in defeating the measure recently brought before our Legislature, asking for

another remission of the University debt fund? The Colleges of Hillsdale and Kalamazoo have refused to submit to what they consider the domineering dictation of the University. These schools that were regarded as the intermediate department—the "*gymnasium or academy*"—practically ignore the existence of the University, or even a Superintendent of Public Instruction. This looks marvelously like a harmonious blending of, at least, two of the departments of this "*Prusso Michigan System*" of education.

The erudite senior ought not to be ignorant of these facts, we therefore infer that his presumption has led him into error in supposing that *we* were.

But, touching the main question of removal of the medical department to this city, he desires first to express his convictions of the paramount importance of clinical observations to the medical neophyte as a means of fitting him for the discharge of those duties which await him when he enters upon the pursuits of professional life *and to record his convictions that these observations may be most successfuliy and profitably made under the supervision and direction of a private preceptor.*"

He still clings to the ghostly remains of a defunct idea, a purpose as obsolete as the incantations of the Egyptian priests. Having once committed himself by *virtue of necessity* to the expressed opinion that the student may have a substitute for clinical instruction while under the supervision of his preceptor, he finds it difficult to appreciate the advantages of hospital instruction. If such are his real convictions, why not give us the detail, expose the secret, and tell us how the country practitioner can give his students advantages, equal to, or at all comparable with the clinical instruction that may be derived from hospitals. Moreover, if such were his real convictions, why did he propose, in the very inception of the medical department, the establishment of a State general hospital, to be located at Ann Arbor?

After thus reiterating his *peculiar* views in relation to hospital instruction, he records a paragraph which exhibits so fully the depth and profundity of his reasoning, that we cannot do better than extract it bodily.

"In discussing the expediency of breaking in upon the unity of the University, and of taking the risk of detracting from the moral force of it, as a whole, for the sake of a contingent advantage to enure to one of its departments, there are several things to be kept in mind—such as that the University has no "College hospital," like the institutions of London and Paris, connected with St. Bartholomew's and St. George's, or La Charite and Hotel Dieu—that hospitals have had their origin since the incoming of the Christian era, are based upon that beautiful requirement of the author and finisher of our faith, that "we should do to others as we would that they should do to us," and should be regarded as asylums for those who are overborne by sickness and want, and not merely theatres for the

exhibition of gladiatorial medicine, or the illustration of the principles which pervade the beneficent science."

He first assumes that a removal of the medical department to this city, would break the unity of the University, and detract from the moral force of it as a whole. But it is not proposed to sever the department from the University organization ; it would still be governed and controlled by the Board of Regents. How, then, would its unity be at all disturbed, or its moral force weakened ? Would it be thus affected if the buildings of the medical department were *one mile* out of the village of Ann Arbor ? We are next informed that the University has no "*College hospital*" like the institutions of Paris, London, &c. This is the most potent reason that could be offered in favor of its removal. Hospital advantages are the life-giving impulses of the New York and Philadelphia schools. We need not go to the Old World for familiar examples illustrative of the utility and success of medical schools, derived from hospital instruction. A State general hospital is an indispensable adjunct to a State medical school, and it would be provided with great facility if the medical department were located where *a State hospital* ought to be located. But such an institution at Ann Arbor would be as much out of place as the medical department is now. This will be at once conceded by every unbiased mind, capable of appreciating the wants and purposes of such an institution. But let the writer answer this objection as he has done on the opposite page, and in the very same article as follows : "*As pertinent to the subject under consideration, we are permitted to state that those devoted and self-sacrificing women, the Sisters of the order of St. Vincent, in charge of St. Mary's Hospital, in this city, have consented to open their house to the graduates of the medical department of the University under the guidance of a clinical professor, subject only to such regulations as will occasion no embarrassment to the professor or his class.*"

This is not the first instance in which the arguments of the writer have been found to contain their own refutation ; but he ought to have added that by the action of the faculty in relation to this matter, they have practically admitted the importance of clinical and hospital advantages, and, moreover, have already determined to make available such as are offered in the city of Detroit. We rejoice that even this first step has been taken, and if the Regents sanction the efforts of the Faculty, *graduates*, at least, will have advantages such as *the whole class* ought to enjoy. We have no fears that St. Mary's Hospital will furnish more glaring exhibitions of "*gladiatorial medicine*" than it has already done, or that any *greater* violence will be done to that "beautiful requirement of doing unto others as we would that others should do unto us," (*under like circumstances.*)

In our judgment, there has been too much partizan attachment to certain ideal *forms*, having a magnitude beyond the compass of a practical

adaptation of available means to the real wants and purposes of the various interests connected with the University. Too much devotion to a rational abstraction, rather than the practical working of a system which may be intrinsically superior to all others. If the system adopted is so arbitrary and circumscribed as not to admit of such modifications as are necessary to the development and utility of any one or more of its departments, the sooner it is abandoned, the better.

Some of the departments will, undoubtedly, flourish best at Ann Arbor—the seat of the University, but the *medical* department must, of necessity, compete with the other medical schools of the country, and to do this successfully, it must offer equal, if not superior advantages. The most flourishing schools of this country, and every other, are those which provide the best clinical and hospital advantages, while the most inferior institutions that are dignified with the appellation of "Medical College," are located in small country towns, where clinical advantages cannot be obtained and cultivated. A lengthened term of study, and *gratuitous instruction* may be sufficient inducement to call together and graduate a class, that will compare favorably in point of *numbers* with many other schools, but not so fovorably, if compared with many others, in respect to *thorough practical instruction.* Now, if a greater desideratum be added to the already strong inducements offered by our medical department, who can doubt, for one moment, that a corresponding increase in the number of students will be added annually to its catalogue?

But let us see if the plan last proposed by the *conservative faction* of the faculty is adequate to the real necessity of the case, or promises to fulfil the requirement. The proposition is, as we understand, to institute a summer course, which is to be given in this city, in connection with the clinical advantages to be derived at St. Mary's Hospital, and understood to be the exclusive privilege of *graduates.* Whether before or after graduation, however, we are not informed. "*Under the guidance of a clinical professor.*"

One man, then, is to represent *all* the departments of medical teaching! this is in perfect keeping with the *one man power* heretofore adopted in the medical supervision of that institution. It is a matter of no surprise to us that this juvenile plan should be proposed by a man who has always exhibited the selfishness of a medical demagogue; but we hope that the good sense of the other members of the Faculty will be sufficient to save the medical department from making a *burlesque* of the original design. Who is this *Hercules* that is to give clinical instruction in all the departments? We would rather introduce such a *prodigy* to our readers than be a *modern discoverer* of a new complication of inguinal hernia!

Now it is very well known that a large majority of the medical stu-

dents that find their way to Ann Arbor, are those who cannot, as well afford to go to New York or Philadelphia. In other words, the difference between $10,00 and $75,00 or $100 is a controlling consideration. Is it probable, then, that these students will be willing to expend enough more for board and tuition to make their aggregate expenses equal to a sum sufficient to give them the graduating honors of New York and Philadelphia schools? Moreover, it would only be consistent with the elevated standard of medical education, which the University may justly claim in consideration of its teachers, and its lengthened term of study, to say nothing of its munificent endowment, to provide the *whole class* during each term of lectures with practical *illustrations* of what they are taught by the advantages of a well furnished surgical clinique, and cases under hospital treatment. To render a medical education practical, to teach the student how to observe, and how to make his observations most useful and available, as in the development of the moral character, it requires "line upon line, and precept upon precept." A familiarity with the physiognomy of disease, in all its varied aspects and forms, is to be acquired, not from books or oral lectures, but by applying the principles inculcated, to practical observations. Now, if the clinical advantages offered in this city were judiciously cultivated, they might be made, to say the least, a very respectable substitute for the "College Hospitals" of older institutions. When *such* advantages *are appreciated* and wisely appropriated, increasing necessities will, of themselves, suggest and lead to ample provision for the increasing demand of adequate facilities for giving hospital instruction.

Now, it is because we have had the moral courage to speak plainly upon this subject, urging its importance, independent of private or sectional interests, that we have been accused, by the urbane senior of the "*Peninsular*," of *assailing* the University generally, and the medical department in particular. But since he has practically *admitted* the importance of hospital advantages, we hope that he may live long enough to satisfy *his own mind* that such advantages as are here proffered, though not equal to those offered in the institutions of Paris, are, nevertheless, vastly superior to the meagre bed-side teachings, which, at best can be offered by the private practitioner. There is more than a natural "State pride" to prompt our desire to see the University perfected in *all* its departments, but more especially do we most earnestly desire to see the medical department fulfil the object for which it was originated, and which its munificent endowment justly entitle its friends to expect and claim. If we "*assail*" any thing in connection with the University it will be some manifestation of that selfish, illiberal policy or dormant conservatism, that would sacrifice a public good for some paltry private interest. This much we owe to the prerogatives of an independent Journal. R.

Our Paris Correspondent.

We are happy to lay before our readers in the present No. the first of a series of communications from a regular correspondent in Paris. The writer is now enjoying the advantages to be derived from attendance upon the hospitals of that city. We can promise to furnish, through his pen, many items, gathered from the life of a medical student in Paris, that will be found entertaining and profitable.

We shall spare no reasonable expense or practicable effort in making our Journal worthy of a prominent position in the medico-periodical literature of this country, and to accomplish this object, we earnestly solicit the continuance of that efficient co-operation which has already been extended to us through the contributions of some of the most studious observers and accomplished writers of our profession.

Significant Extracts from our Exchanges.

It will be remembered that, in our last number, we made a gratuitous insertion of a *pathetic appeal* made by A. B. P., of the "Peninsular Journal," in behalf of his senior associate. We deem it but just and proper, therefore, to insert a few extracts from our cotemporaries, which our modesty, under other circumstances, would hardly permit us to record upon our own pages. We have had many such complimentary notices, both from the medical and secular press, to say nothing of the large correspondence of our subscribers. They have served their purpose well in giving us the cordial hand of fellowship, and kindly words of friendly greeting, strengthening our courage, and giving new zeal to our efforts.

But we need them not for *advertisements*, for if our Journal is not acceptable, and worthy of ample support without them, no approving comments from friends could alone, entitle it to that professional regard and confidence which we labor to secure and maintain.

"In its last number, the "Peninsular" appeals to the profession at large to share in its quarrel with the "Medical Independent. Under the present circumstances, we respectfully decline, so far as we may have been included in that appeal. The parties to the libel suit in question are both medical gentlemen, and both editors; but here their equality ceases. One is at home, wealthy, surrounded by friends—powerful. The other is a foreigner, a man of the closet, a student whose name is only known in connection with his reputation in natural science. He is poor, a stranger—powerless. Let the law decide impartially between these men. We will not risk an opinion."—*Buffalo Medical Journal.*

"*The Medical Independent.*—This valuable monthly has reached the fourth number of the second volume, and improves as it grows older. Dr. Goadby's articles on the "Links Connecting the Vegetable and Animal Kingdoms," continue, together with those "On the Structure and Functions of Insects." These facts are, many of them, positive advances in natural, particularly

microscopic science; and very different from the usual rehashes of the medical journals of the day. Dr. Goadby, in our estimation, has no superior in microscopy in this country; and perhaps not in Europe. He is an honor, like Agassiz, to the land of his adoption. We are sorry to see that a petty, and, we hope, temporary sectional feeling, of the narrowest kind, has been operating to depreciate the character and scientific labors of Dr. Goadby. The good sense, the *arriere pense* of our countrymen will come to the rescue, we doubt not, of truth and justice."—*Philadelphia Medical and Surgical Journal.*

N. E. District Medical and Scientific Association

The annual meeting of this Association was held at Mt. Clemens, Jan. 10th. The following officers were chosen for the ensuing year:

President, Dr. C. M. Stockwell, of Port Huron; Vice President, Dr. Chester McCallum, of Auburn; Secretary, Dr. P. A. Knight, of Utica; Treasurer, Dr. John P. Wilson, of Pontiac.

Drs. W. C. Smith, of Troy, R. G. Jennings, of Lapeer, and O. B. Reed, of Newport, were admitted as new members, and Mr. G. F. Lewis, and Drs. Bancroft of Romeo, Dennis Cooley of Washington, and Neil Gray of Ray, as honorary members.

The following delegates were elected to the National Medical Association which meets at Nashville, Tenn., the first Tuesday in May:—Drs. J. P. Wilson and W. C. Smith, of Oakland Co.; S. L. Andrews and J. M. Champman, of Macomb; O. P. Strowbridge and R. G. Jennnings, of Lapeer; O. B. Reed and C. M. Stockwell of St. Clair.

The following delegates were chosen to the State Medical Society, which meets at Ann Arbor the last Thursday in March:—L. A. Hubbard of Macomb, J. P. Wilson of Oakland, A. R. Stone of Lapeer, and O. B. Reed of St. Clair.

The following standing committees were appointed:

Action of Remedies.—Dr. Hubbard, Macomb, Dr. Paddock, Oakland.

Epidemics.—Dr. H. Taylor, Jr., Macomb, Dr. W. C. Smith, Oakland.

Surgical Practice.—Dr. Wilson, Pontiac, Dr. P. A. Knight, Macomb.

Obstetrics.—Dr. Kenney, Lapeer, Dr. Philips, Macomb.

Dr Phillips, of Oakland County, reported several cases of encephalus which he had recently met with in his practice, and presented one very interesting specimen which he had preserved for examination.

Drs. Stockwell and Andrews also reported cases of a similar nature.

Dr. H. Taylor made a report in the case of the post-mortem examination of James Warner, whereupon

Dr. Jennings offered the following resolution, which after some discussion, the Association not deeming it proper to act in the matter, it being of a

personal nature, unless both parties were either present or represented, was laid upon the table,

Resolved, That we exonerate Dr. Taylor from all the imputation cast upon his character by Dr. Terry, by an article published in the *Independent*, relating to the Medico-Legal examination of James Warner, Macomb County, before the late Circuit Court of said county, and farther more, we believe Dr. Taylor made a faithful and accurate autopsy of said case, and that we believe his conclusions as to said Warner's death, were warranted by said autopsy.

Dr. Taylor offered the following resolution, which was adopted:

Resolved, That in the opinion of this Association it is a duty incumbent upon the present Legislature of this State to pass an act for the Registry of births and deaths.

It was Resolved, That the proceedings of this meeting be published in the Medical Journals of this State.

The Association adjourned to meet at Port Huron, on the second Wednesday in June.

Messrs. Editors:—Allow me to state, though your journal, that the Northeastern Medical and Scientific Association held their late annual meeting at Mt. Clemens, Macomb County, Janunry 10, 1857.

During the session a voluntary report was offered, and allowed to be read before the the Association, upon the facts and evidence derived from a *post mortem* examination made by a "Resident Physician" upon the body of James Warner. The circumstances favoring us with this volumnious report were, that Dr. Terry, of your city, did not come to the same conclusion from the evidence given in the case as to the cause of death; and a somewhat severe criticism upon the testimony given in Court, by the physician who performed the examination, appeared in the December No. of your journal.

As this report elicited considerable discussion, the merits and claims of the *Independent* were, to some extent, considered and tested before the Society.

It appeared, from the general expression of different member, that, with almost *a single exception*, your journal stands high in the estimation of the medical department of our State.

Its freedom and boldness of expression, its practical knowledge, were severally noticed, and from this fact alone, it was deemed an important organ in disseminating useful and practical information throughout the medical profession.

Although comparatively new, as an enterprise, the *Medical Independent* has already acquired a position in the regard and confidence of the medical profession in this State, which nothing, save the progressive spirit of energy and *independent* expression of thought, in the hands of judicious and competent men could accomplish, and it is sincerely to be hoped that

it will soon possess a circulation to which its real merits most justly entitle it.

As the Secretary was directed to furnish you a copy of the proceedings of the meeting, and probably has done so ere this, I will omit further notice of our doings at this time. Yours,

MEMBER OF THE ASSOCIATION.

EDITORIAL CHANGE.

In consequence of other engagements, that will render it necessary for Dr. Goadby to spend the greater part of his time away from this city, his relation as Senior Editor of this Journal has, by mutual consent, become dissolved. Hereafter, he will only be known, in connection therewith, as one of the collaborators. The Journal loses nothing by the change, and we are happy to say that his colleagues have given consent to change the relation, only to enable Dr. Goadby to give more constant supervision and attention to engagements elsewhere. His papers will continue to appear, the same as though the change had not been made.

MICHIGAN STATE MEDICAL SOCIETY.—CORRECTION.

The next annual meeting of this scociety will be held at the College Building, in Ann Arbor, March 25, at 10, A. M., instead of the 24th, as previously stated.

The reason for this change is, that notice has been received that commencement will take place on the 26th instead of the 25th.

Newspapers please copy. E. P. CHRISTIAN, Secretary.

In connection with the above notice, we desire to urge upon the profession the importance of this meeting. We have a State organization that only needs a little active working interest to make the society what it should be—an honor to the profession, and, at the same time, an efficient promoter of its interests.

We earnestly hope that all parts of the State will be represented at that meeting.

TO OUR SUBSCRIBERS.

We take this opportunity, in the commencement of the volume, to remind subscribers of our terms of subscription. The only system that can be adopted to secure the financial success of our Journal must necessarily exact, and insist upon the *prepayment* of $2,00 per annum. We have been obliged to make a few exceptions to this rule during the past year, but justice to our publisher demands even a more rigid regard for the plan adopted. If the Journal, therefore, is not received by those who have failed to comply with our terms, it will require no great effort of the imagination to furnish for themselves a good and sufficient reason.

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HENRI ERNI, A. M., M. D., Chemistry and Toxicology.
EDWARD KANE, M. D., Principles and Practice of Medicine.
DAVID S. CONANT, M. D., Principles and Practice of Surgery.
JOHN V. LANSING, M. D., Physiology and Pathology.
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S. W. THAYER, Jr., Burlington, Vermont,

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THE

MEDICAL INDEPENDENT:

A MONTHLY

Review of Medicine and Surgery.

VOL. 3. DETROIT, APRIL, 1857. NO. 2.

ORIGINAL COMMUNICATIONS.

ARTICLE I.—Chapters from an Unpublished Work on Hygieine.—*Chapter III.—Continued.*

BY A. R T.

Diet, &c.—I shall now make a few concise remarks as to the most wholesome articles of diet, common in our country, and observe on the times of day most suitable for eating, &c., &c. Beef, mutton, pork, veal and poultry form, by far, the largest portion of the animal food consumed in the United States, as they do in most temperate regions of the globe. Fish and game (except in particular localities,) afford but an unimportant part of the animal diet. Oysters, and one or two other Molluscous animals, are consumed in large, and yearly increasing quantities ; and the recently improved facilities for transportation have elevated them, from mere luxuries, almost to the position of staple articles of diet, even in regions remote from the ocean. Crustaceous animals, such as Lobsters, Crabs, Craw-fish, &c., are (except immediately in the neighborhood where they are caught,) to be looked on as luxuries, generally hard to digest, to be avoided, except by the most healthy.

Beef, mutton and poultry, when of a good quality, and properly cooked, are the most easily digested and wholesome of the animal food in common use. Pork and veal are harder of digestion, and, although easily managed by the perfectly healthy stomach, often disagree with the Dyspeptic. Pork is supposed to be especially deleterious in hot climates, and this fact is, by many, supposed to account for the strict Mosaic prohibition of it, as an article of diet. In some parts of South America, the free eating of pork is supposed to produce a form of leprosy, but this opinion wants proof. The flesh of young animals is generally supposed to be harder of digestion than that of old animals. Eggs are a highly nourishing, and, when properly cooked, to most persons, a wholesome article of diet. Oysters, Clams, Mussels, &c., are, especially when raw, very easy of digestion by most stomachs, and are often a good diet for invalids. Of lobsters, &c., I have already spoken.

Vegetables next claim our attention. Of all these, for wide diffusion, universal use, and importance to man, WHEAT stands in the first rank, and its claim will not be disputed. It contains every thing necessary to support and nourish man, in perfect health and vigor, and when properly cooked, is, without doubt, the most wholesome and the most nourishing of vegetable aliments.

Rye most nearly resembles wheat of all the Cereals, but is inferior in all essentials of wholesome nourishment. In the north of Europe, it is extensively used, because it thrives in a higher latitude than is congenial to wheat. There is considerable difference of opinion in regard to the comparative wholesomeness of fermented and unfermented bread, and many substitutes for yeast have been proposed, so that bread might possess the lightness of fermentation, without its supposed deleterious properties. Most of these substitutes form, when mixed in the bread, medicinal salts, the habitual use of which is likely to prove more hurtful than fermented bread. The combination of soda and muriatic acid forms common salt, and a light, wholesome, palatable bread can be made by a careful apportioning of these with flour and water ; but a practical difficulty exists in the varying strength of the acid of commerce, and, except under peculiar circumstances, there is no probability that their use will ever supersede that of yeast.

The whole tribe of Tartaric acid, Cremor Tartar, Soda, and other baking powders should be eschewed by the prudent. In connexion with wheat, paste or pastry may be appropriately spoken of. I would by no means utterly proscribe and condemn all pastry, as is done by some, but still it should be used seldom, and in moderation, and never as a supererogation to an otherwise full and sufficient meal. It would always be we well if the coming of the pastry could be considered in the eating of the first course. Some other preparations, into which wheat flour enters as a constituent, can hardly be too strongly reprobated. I speak of the rich cakes, compounded of flour, butter, sugar, spices, and sometimes fruits. There seems to be a peculiarly hurtful and indigestible compound formed, when flour, sugar and butter, or lard, are subjected to the process of baking, and I do not hesitate to say, that a proper regard for health should banish this compound from every well regulated household. Puddings, either with or without fruit, when not very rich, are generally wholesome and easy of digestion, and, especially in families living in the country, are a desirable and excellent addition to the ordinary diet of meat and vegetables.

Hot rolls, and fried griddle cakes, waffles, muffins, and all that tribe are trying to weak stomachs, but they will be eaten, and moderation is the best precept.

Maize, or Indian corn, comes next in importance to wheat, as a staple article of vegetable diet in our country, and by many it is held in even higher estimation than that King of grains. A vast variety of wholesome and palatable preparations are made from this grain, and to those who have been, from childhood, accustomed to it, it possesses a sapidity and flavor which is poorly compensated for by the comparatively insipid wheat. As a food for the hard working man, for the hunter, the boatman and the voyageur, it is, especially in cold weather, almost equal to fat meat. This grain needs a great deal of cooking to develope its full excellence, and no one who has tasted the luxuries of hoe-cake, corn-muffin, sepaun, hominy, (big and little,) mush and milk, &c., will forget them, even among the refinements of an European cuisine.

Rice, in our Southern States, forms an excellent, wholesome and nourishing article of diet ; bland and unirritating, it is

peculiarly fitted for the inhabitants of warm regions. At the South, it is commonly used as an accompaniment to meats, either plain boiled, or in pillau, while at the North, it is more used for puddings, &c. In both ways it is wholesome and palatable.

Potatoes have long been considered an indispensible accompaniment of every dinner-table at the North, but the unfortunate malady which has, for a few years past, affected the tubers, has greatly depreciated the excellencies of the vegetable, and enhanced its price. Although the potato is far inferior in point of quantity of nourishment, either to wheat, rye, or maize, yet the vast amount yielded to the acre, the ease with which it was cultivated, its palatableness and wholesomeness, rendered it a favorite with both rich and poor, and to the poor it was a choice blessing. But alas, the potato disease has changed it from a cheap staple article of food, to a luxury. At this time—1857—a dollar expended in the best white wheat bread, will go farther to nourish a family, than twice the sum spent in purchasing potatoes. But still, to the farmer, they are a valuable crop, and, either for market, or for his own use, richly repay the cost of cultivation, in most instances.

Peas and beans, in some sections of our country, form an important portion of the diet of the rural population. Every one has heard of the Pork and Beans of New England. These two articles of diet do very well for the man of strong digestion, but are to be avoided by the delicate and dyspeptic. Cabbage and turnips are closely allied in their chemical as well as botanical relations ; they contain a large proportion of water, and are, to most stomachs, hard of digestion, but when they agree, they afford a wholesome addition to the stock of winter vegetables. Pumpkins and squashes, prepared in various ways, are both palatable and wholesome. Beets, carrots, parsnips, artichokes, green pease, green corn, &c., are rather to be regarded as occasional variations, than as staple articles of diet. The same may be said of that delicious and wholesome vegetable, the tomato.

Fruits will next engage our attention. Of these, at the North, the most abundant, and the most valuable is the apple ; and too much can hardly be said it its praise, either as an article of wholesome food, available the year round, or as a

luxury. From the juicy and delicious, but perishable harvest apple, to the glorious Newtown Pippin, which can be carried in perfection to China, our country furnishes a vast variety of the most delicious apples ; and, when ripe, either raw or cooked, they form one of the most harmless and salutary articles of diet. What school-boy in the country has not luxuriated in his lunch of sweet brown bread and butter, and juicy pippins, or seeknofurthers ? Pears, peaches, apricots, strawberries, grapes, and the different wild fruits, are all salutary in their seasons, but, as articles of diet, hardly deserve a mention. The tropical fruits, although some of them are grown within the bounds of our Southern States, are not within the scope of a work like this.

Having now enumerated, and cursorily remarked on the principle articles of diet in common use in our country, I shall discuss the times, seasons, and manner of eating, which appear to be most conducive to health.

All are agreed that moderation in all things is commendable, and in nothing is it certainly more so than in our diet. But, what is moderation, and almost abstemiousness, in one man, is excess in another. It does not take long for a man of any observation to find out what agrees or disagrees with him, and what quantities of food, and what times of eating, are most salutary ; but still, there are certain general rules, which will apply more or less to all, and it shall be my endeavor to lay down these, for the benefit of my readers.

In regard to the times of eating, this must, in a considerable degree, depend on the occupation, and previous habits of the individual. The man who turns night into day, and day into night, cannot breakfast and dine at the same hours as the day laborer, nor can the merchant or professional man, whose occupations are often continued far into the night, rise with the lark, like the man who goes to roost with the chickens. As it is admitted that early rising is one of the main conditions for the maintenance of health, it becomes an interesting question, how soon food should be taken after rising. My own experience and observation are against any long delay, and especially against the taking of much exercise before breakfast. To breathe the fresh air in fine weather, may be very well before breakfast, but, especially in dyspeptic persons, much exercise is

apt to produce languor and less of appetite. And now for the materials of breakfast. A prudent person, who eschews late suppers, will rise in the morning with an empty stomach, and, even if he be in the habit of dining as early as one hour after noon, a considerable time must elapse before the vacuum is supplied, unless he eats a hearty breakfast. It has become too much the custom to breakfast on a morsel of bread, and a cup of strong tea or coffee, or even on the tea or coffee without the bread. One of three consequences is very apt to ensue: either the stomach becomes exhausted, and, to relieve the disagreeable feeling, lunch, probably accompanied by a glass of liquor, is taken; or if this is not done, the appetite may be lost from exhaustion before dinner time, and stimulus is required to restore it; or, thirdly, the strong stomach may retain its vigorous appetite, and take more food than is proper at dinner. In either case, languor, sleepiness, and indisposition to exertion, are apt to follow, especially in hot weather. A hearty breakfast is the best material preparation for a day of labor, either mental or bodily, and it is, of all the three meals, the one which can most safely, to all constitutions, be made a hearty one. As regards the materials for breakfast: Eggs, cooked in various ways, form a staple of the breakfast table in most parts of the civilized world, and, with good bread and butter and tea or coffee, make both a wholesome and palatable meal, and one which agrees well with most stomachs. Salt fish, as a relish, with the indispensible bread in some form, is in extensive use, and, when employed in moderation, is wholesome to the sound stomach. Dyspeptics should use it with caution. To the man engaged in active out-of-door exercise, and to the laborer, a hearty meat breakfast is not inappropriate; and, thank God, we live in a country where the son of toil can command it, if he wishes it. In the neighborhood of the sea shore, fish, both shell and scale, form a palatable and excellent material for breakfast. The whole tribe of hot rolls, muffins, waffles, griddle-cakes, &c., I have already spoken of—they should be used in moderation. As to buckwheat cakes, I am afraid I should raise a storm about my head, if I were to say what I think of them, and therefore I will refrain. It has been much the fashion, of late years, to decry and condemn, *in toto*, tea and coffee. That the immoderate use of strong tea or coffee may,

and does, injure the digestion and nervous system, I am not prepared to deny. And that children will, as a general rule, be better without them, I also believe. But that their moderate use by adults, is, in our artificial and overtasked state of society, not only harmless, but salutary, I, with confidence, affirm. They exert a mild soothing influence over the harrassed and irritated nervous system, much safer, as well as more pleasant, than that caused by alcoholic stimulus. Who is there that has not felt his energies of mind and body both renewed, by a good cup or two of tea or coffee—and who ever felt secondary languor following their use ? Even in those rare cases where they apparently disagree, and unpleasant excitement and wakefulness are produced by their use, the effect is transitory. A cup of tea or coffee will often rouse the delicate stomach to the digestion of some oppressive substance, which has been eaten, much more certainly and safely than a glass of brandy. If they are poisons, they are so slow that the life of man is not long enough for them to produce their effect in.

The hour at which dinner should be eaten has been a subject of much, and, I think, of useless discussion. That noon, or soon after, is the proper hour for the mechanic, the farmer, the laborer, and also for the trader, and professional man, residing either in the country or in the smaller towns and cities of our country, there can be no doubt. The comparatively early hour of going to bed, of all these classes, seems to render it necessary that the principal meal of the day should not be delayed until a late hour ; and as custom has fixed on the two hours after noon as the usual limit of the dinner hour, in our country, it is necessary to say little on the subject. But I cannot here omit entering my protest against the too common practice of making dinner almost the only meal of the day. There are many who eat enormous dinners, and hardly eat any thing at either of the other meals. There are various reasons against such a practice. Persons engaged in active occupations, especially in hot weather, are more or less exhausted by dinner time, and will be oppressed, rather than invigorated, by a very full meal, while a moderate one will impart fresh vigor. Again, immediate occupation, of either mind or body, after a *very* full meal, in a greater or less degree, retards digestion, and for our workaday generation, this is an important consideration. A judicious division of the amount of food for the

twenty-four hours, I consider of quite as much importance as care in regard to quality. A very pernicious practice, which some indulge in, is sleeping immediately after a full dinner; many aggravated cases of dyspepsia, which have fallen under my care, have apparently been produced by this practice. To those who can afford the time, an hour's rest, with pleasant conversation, or the companionship of a book or newspaper, is very desirable after dinner; but go hard at work rather than sleep. The practice of dining at five, six, seven, or even eight o'clock, will do very well for men of fortune and leisure, but in that case lunch is necessary, and dinner should be the last meal of the day. Merchants and professional men in large cities, whose business closes at five or six in the evening, may very well dine after that hour.

The third meal of the day, called by some, tea, and by others, supper,, is, by many, reduced to the mere cup of tea or coffee, and this is often taken solely for the purpose of removing the effects of a too hearty and ill digested dinner. In this case a late supper is very apt to follow, to the destruction of quiet rest and the signal injury of the health. Three temperate and moderate meals a day, the first taken soon after rising, the second soon after noon, and the third at least three hours before going to bed, form, in my opinion, the regimen in food most calculated to preserve health. Late suppers are a prolific cause of dyspepsia, and, in persons of a full habit, of congestion of the brain. Many a man, who might otherwise have lived for years, has been hurried off by an attack of apoplexy, induced by an undigested hot supper, assisted by champagne and brandy and water. Few extravagancies introduced by the growing wealth and means of luxury now so extensively diffused in our land are productive of more positive injury, in more than one way, than the practice of giving luxurious hot suppers at evening parties, accompanied by all the provocatives to excess, offered by strong liquors, and delicious wines. The excitement of lights, music, conversation, and dancing, are quite enough for the young and joyous, and assemblies, which ought to be occasions of harmless mirth and enjoyment, are converted into mere sensual affairs of eating and drinking. And we may consider ourselves well off if headaches and dyspepsia are the the worst results of such excess. There is another point of view in which such extravagant and luxurious entertainments

are to be seriously deprecated, and that is the emulation to shine in the same way, which is too often created in the breast of him or her, who is ill able to afford it. I affirm that the giving of such entertainments is a serious check to the prevalence of unrestrained and pleasant social intercourse. The family every way equal, and, perhaps, superior, to the family next door, in every thing which gives the chief charm to social intercourse, in education, refinement of manners, wit and amiability, is deterred from inviting their friends to a musical, conversational, or dancing party, because they cannot afford to treat the company to *Champagne, Roman Punch, Patè de foie gras, Game, Oysters, &c., &c.* And many people who are capable of being ornaments to society are prevented from mingling habitually in it, by the absurd custom of making evening parties mere feasts. The sum that is often spent on the one great luxurious feast in the winter, would suffice to give half a dozen merry hops, with sponge cake, ices and lemonade for refreshments, and well ventilated lungs, and cool heads for the guests to take home with them. We are a great nation, and in wealth and importance, every day growing greater, but there is certainly among us too much tendency to the sensual and material, and in nothing is it more prominently developed than in our social intercourse. The French, confessedly the politest nation in the world, manage these things quite differently.

(TO BE CONTINUED.)

ARTICLE II.—Selections from Surgical Notes.

BY PROF. GUNN.

Resections.—Case I. April 13, 1851. B., aged about 25, presented himself at the college clinic, with a constantly increasing osteoma of the body of the inferior maxilla. As the tumor involved the whole thickness of the bone, resection became an operation of necessity. Chloroform was used, and anæsthesia being complete, I commenced the operation by an incision along the base of the jaw, extending from opposite the lateral incisor to the angle ; another was made at right angles from the anterior extremity to the mouth. The facial artery was secured, and a flap, composed of the cheek, turned up, ex-

posing the external surface of the jaw. The dissection was then carried behind the bone, through to the mouth at the anterior portion of the wound, a section made with Hey's saw, the bone separated from the soft parts, and resected at the angle. The flap was adjusted, and the wound healed by first intention. Contraction of the internal pterygoid distorted the remaining half of the jaw, giving a wry appearance to the face, and preventing accurate meeting of the teeth. This difficulty was so great as to prevent mastication, and the patient was obliged to subsist on liquid food for many weeks, and a year passed before perfect control of the mutilated member was obtained.

Case 2. March 19, 1853. A gentleman, aged about 35, brought a letter to me from Dr. Upjohn, of Hastings. He was suffering from a carious condition of the body of the inferior maxilla. The bone was much enlarged, and gave rise to a fœtid discharge. Resection was here, too, an operation, not of choice, but of necessity, and in the performance was almost identical with the preceding case. The closure of the wound was equally rapid and perfect. There was, however, no muscular contraction, and the patient retained full and perfect control of the remaining portion of the jaw, as evidenced by his mastication of beef-steak at the table of his hotel one week from the operation.

I have placed these two cases in juxta-position, not solely from their similarity, but also from the discrepancy observed in the power to control the balance of the member. The two cases exhibit a parity in reference to general health, feasibility of the operation, mode of its performance, and rapidity of cure ; yet one requires a twelvemonth to learn to use the crippled member, and the other uses it immediately with facility. Similar will be our experience in observing the result of fractures and amputations. Two patients may suffer from similar fractures, experience similar cures, and one will walk easily and gracefully, while the other will obstinately halt, to the torment of his perhaps skillful and pains-taking surgeon. Two patients may endure the loss of a leg, the stumps may be similar in form, firmness and soundness; artificial limbs, equal in perfection and adjustment may replace the loss, and one will walk almost gracefully without the aid of a cane, while the other cannot trust himself without its additional support.

In the first case, which I have repeatedly seen since the operation, a firm cartilaginoid deposit took place along the course of the removed bone. The second case I have never met since his dismissal.

Case 3. During the winter of 1850–51, a young Irishman, aged about 20 years, presented himself at the college clinic with caries of the head, and necrosis of the shaft of the humerus, involving the upper two-fifths of the bone. There was also partial anchylosis of the joint, caused, as was afterwards shown by the operation, by adhesions in the joint. I determined on resection, and the patient being chloroformed, I carried an incision from the acromion to a point just below the deltoid insertion, through fascia and muscle down to the bone, dissected the tissues from the bone, opened the joint—my progress through which was much impeded by adhesions which nearly obliterated the synovial cavity, dislocated the head, completed the dissection and sawed through the bone at the deltoid ridge. The sircumflex arteries only required ligature, and the wound was dressed with sutures and straps. On the second day erysipelatous inflammation involved the whole arm, from shoulder to hand, which subsided with a profuse discharge of fœtid and ill conditioned pus from the wound. Quinine, wine and animal broth were freely exhibited, and union by first intention was secured in the upper two-thirds of the wound, with healthy discharge from the lower portion. Fourteen days from the operation the patient was discharged, and returned to his home.

Case 4. Dec. 13, 1854. H., a lad 15 years of age. Caries of the head and upper third of humerus. Freedom of motion in the joint, though the whole head seems to be in perfectly softened condition. Operation similar to preceding case, except that the main incision was met at its lower extremity by a short transverse cut. Every thing progressed favorably, and on the fourteenth day, the patient was discharged, and started on his return.

These two cases are illustrative of the advantages of conservative surgery. In operating for caries we usually find ourselves in the immediate neighborhood of joints, and while we are generally called upon to sacrifice the whole joint extremity of the bone, we may by resections save a valuable member. In each of the last two cases, by the use of a firm leather splint,

embracing the shoulder and arm, the patients were enabled to use the limb for most ordinary purposes. The first I have not heard from since the summer following the operation, when he was peforming heavy manual labor. The lad, I heard from a few days since, and he is as useful as most lads of his age upon a farm.

Detroit, March 16, 1857.

ARTICLE III.—Cases Drawn from Brief Notes.

BY E. M. CLARK, M. D.

Strangulated Crural Hernia with Sloughiny of four inches of Intestine.—Mrs. Marontet, aged 53, who resides on Belle River, Canada West, had suffered twelve days from strangulated Crural Hernia of the right side; during which time she had no alvine evacuation, but had vomited daily more or less stercoraceous matter. The abdomen was enormously distended, pulse very feeble, skin cold and clammy, and the hernial tumor gave distinct crepitus under the fingures. I at first declined any surgical interference, but finally, at the urgent solicitation of the patient, and her friends, I cut down upon the sac, which, when opened, exposed a portion of sphacellated intestine about four inches in length. In a few moments, by an effort to vomit, the insestine was torn open, and large quantities of fœcal matter were discharged through the rent, very much to the relief of the patient. The intestine was firmly adherent to the ring, thus obviating all danger from discharge of fœcal matter into the cavity of the peretoneum. The parts were dressed with warm cataplasms until the slough separated, after which, compresses were so applied, as in some measure to control the alvine discharges. An artificial anus was made, however, which I informed the patient she must rely upon during the balance of her life. Eight weeks later, somewhat to my surprise, I learned from her son that my patient had entirely recovered, the wound had closed, and her alvine evacuations were made per rectum.

This case presented to us an interesting illustration of Nature's surgery, and as such we deem it worthy of record.

Polypus of the Uterus.—Mrs. L., of East Saginaw, aged 40, has been married three years, has had several miscarriages, occurring in the early stage of pregnancy. August 20, 1855, at about the sixth month of pregnancy, she was attacked with labor pains, which progressed favorably for several hours, when a very severe pain was followed by convulsion. Several hours after this another such severe pain and convulsion supervened. The attending physician then, on examination, discovered a tumor about six inches in diameter, which had been expelled beyond the vulva—the child still remaining in the vagina.

I saw Mrs. L. thirty-six hours subsequent to the expulsion, and, upon examination, found it attached to the inner surface of the uterus by a short pedicle of about an inch and a quarter in diameter, and dragging so forcibly upon the parts as to occasion great suffering. Her abdomen was tympanitic and tender, pulse 130. I ligated the pedicle, and, with the knife, severed the tumor, giving immediate relief to the patient. I saw no more of Mrs. L., learned from her physician that the ligature came off in due season, and the case went on favorably to apparent recovery. Several weeks subsequent to this apparent recovery, while making preparations to visit her friends in this city—Detroit—she was taken suddenly ill, and died in a few hours! The tumor was of a dense fibro-cartalaginous structure, and we may reasonably infer that by its size and growth it had provoked the uterus thus prematurely to bring its parturient labors to a close.

Abscess of the Liver, Discharging through the Lungs.—Geo. L., of Detroit, aged about 28—an engine-driver on the Michigan Central Railroad—has had pain in his right hypochondrium for a year past, symptoms of suppressed billious secretion has recurred from time to, which were generally relieved by the use of mild mercurials. The pain, however, still continued and increased, accompanied with a general appearance of fullness or enlargement of the side affected. After suffering from this pain about nine months he was obliged to abandon business. He grew rapidly worse; had chills and fever; cough supervened, which increased rapidly in severity, and attended with mucous expectoration. There was, at this time, dullness on percussion from two inches below the ribs upward to the fourth rib. One day, during a severe fit of coughing, a large amount

of pus was expectorated. It came so rapidly as nearly to produce suffocation. From this time he sank rapidly. Hectic symptoms increased, and large quantities of pus were expectorated daily. I had suspected the existence of abscess of the liver, and examined frequently, with the hope of finding some point of adhesion between the liver and parieties of the abdomen, where an opening might be made. I finally discovered a point indurated to some extent, and situated near the anterior extremity of the lower short rib, where I believed sufficient adhesion had taken place to warrant an opening. I introduced an exploring knife and reached the abscess. I then enlarged the opening slightly, and drew off 16 ounces of pus, after which I closed the wound by collodion. After an interval of two days I drew off about 16 ounces more, and again closed the orifice. I continued to draw of pus at intervals of one and two days until the secretion had considerably diminished, and then left it free to discharge as fast as collected. The cough and expectoration diminished rapidly, and under the liberal use of tonics my patient soon recovered his health.

It is now about four years since Mr. L. suffered from this illness, and up to this time he has enjoyed excellent health.

Detroit, March, 1857.

GLYCERINE IN PHTHISIS.

Professor N. S. Davis, of Chicago, reports his success in the employment of this remedy, and furnishes the following recipes, viz:

In the early stage of tuberculous disease, and before the cough is accompanied by much expectoration, he gives one tea-spoonful of No. 1, before each meal and at bed time.

No. 1. ℞—Glycerine, ℥ ij.
Iodide of Potassa, ʒ j.
Sulph. Morphine, 2grs.
Mix.

When the disease is further advanced, with copious expectoration and rapidly increasing emaciation, he prefers the following, No. 2.

No. 2. ℞—Glycerine, ℥ ij.
Syr. Iodide of Iron, ℥ ss
Sulph. Morphine 2grs.
Mix.

Dose a tea-spoonful every four hours.

SPIRIT OF THE MEDICAL PRESS.

An Operation for the Removal of a Uterine Tumor, together with the Extirpation of the Entire Organ, and its Appendages. By William J. Baker, M. D., Knoxville, Tenn.

Matilda, a negress, servant of Mrs. Laura Bearden, of this city, married, but without children, has been occasionally, since the year 1851, under treatment for inflammation of the os uteri.

In March she became pregnant, but aborted in the latter part of April. She has always suffered from dysmenorrhœa. With these exceptions, her general health had been good, previous to October, 1855. About this time, she states that she began to feel a lump in the right iliac region. Nervous disturbance began also to be more distressing.

In June, 1856, was requested to see her. Found her suffering severe pain in lumbar vertebræ and thence through the pelvis, with usual symptoms of dysmenorrhœa; the disturbance of the nervous system amounted to hysteria. There was retention of urine, and the catheter was used, and a copious amount of urinary secretion secured. The abdominal tumor was noticed, and, upon inquiry, it was found to be of eleven months standing.

She had been under the impression that she was pregnant. It occupied all the hypogastric region and a portion of both iliacs, inclining decidedly to the right. It is firm to the feel, somewhat moveable, and reaches upwards to within two and a half inches below the umbilicus. An examination per vaginam reveals a slightly nodulated surface, far back between the promontory of the sacrum and the uterus.

The womb is pushed forward, and is evidently retroverted. The os high up behind the pubis.

The speculum shows the tissue visible, to be in a healthy condition. The os, however, cannot be grasped by the valves of the speculum. From this time forward she was under treatment, it being sought by remedial measures, local and constitutional, to retard or check the growth. In every succeeding menstral return, medical interference was necessary to paliate her sufferings. Each time the catheter was used to obviate retention, and purgative medicines were indicated. The menstrual discharge continued for thirty-six hours. but was in small quantity, and of a black appearance.

In August, another and serious inconvenience manifested itself, viz: constipation, which rendered a frequent necessity of laxative medicines.

During *the period* the rectum became irritated, and in one instance, positive inflamination supervened.

From the 10th of October, constitutional derangement grew rapidly and steadily worse. Previous to this time, she had enjoyed at least an immunity from pain. Now it was constant, and frequently excruciating. The pain was described as dull, heavy and aching in the pelvis, but sharp and lancinating from the sacrum to the dorsal vertebra.

Depression in the tone of the nervous system was more rapid.

Hysteria exhibits itself frequently, and slight causes produce paroxysms. The appetite is very much impaired, morbid and irregular, and she sleeps, really, for nights successively, scarcely at all. The tumor feels in size through the abdominal parietes, as the pregnant uterus of seven months.

There is a well marked protruberance in the right lumbar region. This protruberance can, by kneading, be moved over as far as the mesian line, a distance of two and a half inches.

To *the touch*, the womb not only feels heavy, but offers to the finger a degree of elastic resistance. It reveals also a gradually extending irregular surface. The mammæ are enlarged. The areola has increased in area and in depth of color, and there is a secretion of milk. Depraved appetite and longing is marked. She insists that she has felt motion as of a fœtus in utero.

A sound was introduced in the womb, to determine the size of its cavity. It was introduced with diffiuulty, and met the walls of the fundus two inches from the os.

Convinced that nature could not long resist the ravages of the above mentioned conditions, but must soon yield to such mischief at work, an operation to remove the tumor was proposed. Diagnosis could not determine whether or not the tumor had grown from the matrix, or some contiguous point. It was certainly attached to the womb, but whether the base was fixed from origin and growth was only conjectural. Drs. Rodgers and Sawyers having been called in consultation, examined carefully the case and concurred in the propriety of an operation for removal.

Friday, November 6.—Menstruation came on in usual quantity, and with usual increase of grievances.

It was determined to operate on the following Tuesday, November 13. At 10 o'clock A. M., Drs. Rodgers and Sawyers kindly assisting, the patient was anæsthetized. Choloric ether was administered by Dr. Sawyers in the outset, but its action was very tardy, and chloroform was substituted. In a few minutes thorough insensibility was procured, and the operation was commenced by making an incision from the umbilicus to the pubes in the linea alba. So soon as the division of the abdominal walls was complete at the middle portion of the incision, the prtuberance of the tumor came out. Upon attempting to lift it, a portion of the tumor was found to extend above the umbilicus, whereupon the incision was extended one and one-half inches higher, avoiding the navel. The upper portion of the tumor could now be raised, and by turning out the bowels, it was discovered to be attached to the

sacral and lumbar vertebral regions by extensive and pretty firm adhesion. It was also found that the ovaries and uterus were so involved that separation was quite impossible. Indeed, the uterine walls were hypertrophied, and distorted, and had become heterologous, and a portion of the tumor. The ovaries were involved only from contiguity, the peritoneal covering adhering. Now, either the tumor must be returned, be but partially extirpated, or womb, ovaries and tumors, brought away.

After a few moments deliberation, it was determined to excise the whole. accordingly, the serous adhesions were torn or dissected up. The ligaments were severed until the mass was attached only by the vagina as a pedicle. A needle, armed wth a ligature, was now passed throngh the cervix, and the lateral halves constricted tightly. The cervix was divided immediately above the ligature, and the mass removed.

The pedicle was brought to the lowest point of incision and secured. The wound was closed by the interrupted suture.

There was probably left of the neck and cervix from the os to the ligature half an inch—the section being made at a point just above the juncture of the vaginal walls of the neck. During the process of the operation, but one artery required ligation, viz : the spermatic of the left, when the broad ligament was cut. There was no hemorrhage from that of the right side. The venous hemorrhage probably amounted altogether to ℥ x. The patient bore chloroform remarkably well. The tumor and parts excised, weighed 46 ounces avoirdupois. It was of a fibrous nature, but its character will be more definitely given, when it shall have been submitted to microscopic examination.

A glance at the condition of the patient, for several consecutive days, is appended. As soon as she had come out sufficiently from the effects of chloroform, 100 *m.* tinct. opii. were administered and an *opium to narcotism treatment* adopted. Peritonitis was, of course, anticipated, and dreaded. It was sought by narcosis to control the peristaltic action, or to "put the bowels in splints." Ordered, grs. ij. opium, every 4 hours, together with tinct. valerian ℥ j. when necessary to quell nervous excitement.

November 14th, visit 8, A. M.—Pulse 98 ; skin natural; slight thirst; tongue looks pretty well ; has occasional spasm of the bowels ; kidneys active, but urine of a darkish red color. Ordered a continuance of the opium.

4, P. M.—Pulse 108 ; tongue rather dry, with a heavy coat ; skin hot and dry ; some restlessness ; kidneys have acted freely ; urine improved ; some distention of abdomen. Opium continued. Sodæ bi. carb. given in drink. Barley water allowed.

15th, 8, A. M.—Pulse 98; skin pleasant; slept more comfortably last night ; tongue coated white, but cleaning ; kidneys acted twice last night ; secretion more natural. Continue same prescription.

6, P. M.—Pulse 103; skin pleasant; great tympanitic distention ; knees drawn up ; nausea and jactitation ; incision is discharging pus, healthy in its character.

Fresh adhesive plaster applied ; cold cloths applied to abdomen ; opium continued.

16th, 8, A.M.—Pulse 86 ; tongue more moist, but very white ; secretion of kidneys improved in quantity and quality.

Some eructations with occasional singultus. Prescription continued.

November 17th, 8, A. M.—Pulse 108 ; epigastric region much distended ; frequent eructations ; abdomen less swollen, and softened; pus looks laudable, but has a fœtid odor ; breath offensive ; has had slight action from bowels ; kidneys doing well, ordered carbon 20 grs.; beef tea occasionally.

℞. Chloride soda,..... ℥j.
Aqua destillata,..... ℥vij., to be applied to the wound.

Opium continued.

18th, 8, A. M.—Pulse 108 ; rested badly last night, but was not in pain ; kidneys active ; abdomen reduced smartly ; opium discontinued ; carbon and mag. advised ; is allowed chicken water.

19th, 8, A. M.—Pulse 108 ; has had two actions from the bowels ; tension and swelling greatly reduced ; pus is healthy and increased in quantity. Is allowed light diet. Mur. tinct. opii. to be given if there should occur pain or restlessness.

20th, 5, P. M.—Pulse 98 ; bowels and kidneys have acted ; wound discharges freely ; appetite slightly improved.

On the 23d and 25th of November the sutures were removed. Wound healing nicely.

November 26.—It became necessary to adopt a tonic supporting plan of treatment. Ordered 12 drops aromatic sulph. acid in an ounce and a half of cold infusion of chamomile, three times a day.

November 29th.—The pedicle ligatures came away.

December 3d and 4th.—The days that menstruation should have appeared there was marked increase in severity of symptoms. Pulse 100 to 104; appetite failed ; there was distressing nausea and vomiting ; hysteria ; pains in the abdomen ; diminished urinary secretion and retention. Her aspect and condition were strikingly similar to that presented antecedent to, and during menstruation.

December 5 and 6.—She had recuperated considerably, though it was necessary for several successive days to use the catheter.

From this time forward there was only occasional and slight interruptions to a gradual yet steady return to health. The wound, three-fourths of it, had cicatrized. At the point where the pedicle was attached, there was a free discharge of pus, and on December 20th, a string of dead areolar tissue was removed just from the locality of the pedicle. This core was, in extraction, broken in several places, but altogether measured four and a half inches.

January 1st and 2d, 1857.—Was rather more uncomfortable ; period for menstruation.

January 3d.—Is free from uneasiness ; wound has healed almost entirely, discharge is very small. Is allowed to sit up, but not to walk farther than from the bed to the chair. She was to-day discharged.—*Southern Journal.*

Cooked or Raw Meat?

If either of the writers who have recently published, in the Medical Journal, their reflections on the subject of raw animal food, entertain any reasonable expectation of revolutionizing the habits of man as "a cooking animal," it is certainly to be hoped that their fund of argument ts not yet exhausted. It is surely no reason that man *should* eat his meat raw, because he *can*, unless a farther motive can be adduced for it. Let it be shown, however, that to cook is to impair the nutritive value of animal food, and that the condiments of cooking are useless, or worse than useless, and we may be induced to follow the advice of Mr. Webster, in another matter, and "conquer our prejudices;" or, even may join a regiment of raw and bloody reformers, if one shall ever be mustered. At present, we cannot "rest *secure* in the belief that we civilized beings are going counter to some of the primitive laws of digestion."

What are the "primitive" laws of digestion? The most primitive are those deduced by experience, and not codified, so to speak, until long after they had been obeyed as rules of action. In other words, experience regulated the selection of food a long while before science came to explain why and wherefore the rules were right. Experience may have gone wrong, but where is the evidence that it did so? It is not a new fact that Maine lumbermen, Arctic explorers and guests at Abyssinian hospitalities, consume, among other things, meat not cooked; and more may be admitted to the same effect, as it is well known that there are whole tribes of savages who take raw meat with evident pleasure. It is also within our own local observation, that an invalid will now and then try animal food raw, as an alterative more promising than drugs. All this, however, proves nothing but man's omnivorous capacity. In comparison with the accumulated evidence of centuries, that man has always cooked his meat when he could, such individual exceptions are not safe indications of the primitive laws of digestion. Not only has man acted on the laws that cooking is useful, but his improvement of food is adopted by carnivorous brutes, who always eat cooked meat when they can get it; and man, again, following up their instinct, has learned that in raising animals to the greatest advantage it is profitable to cook food for them.

But the present purpose is to see what science, rather than experience, teaches in relation to the nutrition to be derived from from animal food. The bearing of the evidence from this source may be expected to show, at least, that the laws of physiology and chemistry furnish no reason for changing our habit of cooking. On the other hand, not a little proof may be deduced from it that the nutritive element of meat is in larger proportion and in better form in cooked animal food than in raw.

What is the process of human nutrition? Omitting, at this time, bread, "the staff of life," and kindred articles of food, it may be said, with sufficient exactness, that all animal food may be divided into two dissimilar elements, that which is convertible into albumen and that which is not; or, in the language of chemistry, into elements containing nitrogen and those entirely

destitute of it. The former of these is convertible into blood; the latter is not. The one is the material for, and component of the tissues of the body, and is digestible, or acted upon by the gastric fluid. The other principal part of the food is fat, and undergoes no change in the stomach; is not affected by the gastric fluid, and passes on unaltered, except by minute subdivision, as in ordinary officinal emulsions. It is a hydro-carbon, or fuel, to be burnt with the oxygen in the lungs, so much of it as is required, and thus energize and convert into structure and sustain, the products of the other portion of the food,

Is there, in physiology or chemistry, any evidence that cooking depreciates the value of either of these as human ailment? Careful analyses have demonstrated that boiled meat, and especially the boiled flesh of the hog, abounds considerebly more in nitrogen than the raw; and as this is an important element in tissue-making pabulum, this evidence, so far as it goes, is in favor of cooking. The only deduction from this, which now comes to mind, is the opinion of an eminent chemist that "roasting and boiling alter in no way the composition of animal food," so that adopting either conclusion there is no reason, from this source, to believe that a loss is caused by cooking.

If the conclusion is a reasonable one, that cooked meat is at least as nutritive if not more so, than raw, when examined by physiological and chemical science, the question may still be asked, do not the facts adduced by the writers in the Journal tend to show that raw flesh will *practically* answer as good a purpose? There is no evidence, in these facts, of general application. The inferences are drawn from peculiar and not universal circumstances. Zeb. Mitchell & Co., living in the open air, with a good supply of albumen. furnishing bread to eat, had come to quite a rapid generalization that a given and small piece of raw fat pork "lasted longer" than one of the same size when cooked. In other words, when it was not "tried out" by boiling or frying, there was less boiling or frying, there was less "fat in the fire" at once. Wood, also, lasts longer than charcoal; but is it a better heat generator?

It is quite likely, in that moderately cold region, that if they had used no other food, they would in time have burnt up "the house I live in," and wished their albumen-formed structure hand "lasted longer." Dr. Kane, who was also never without breadstuff, and respiring an atmosphere so cold that its volume of oxygen was highly condensed, had a peculiar and imperative call for large quantities of hydro-carbon to burn and save his body. Probably he might have swallowed fat in almost any amount, that would "stay," short of a dose of oil. At last, however, having so much oxygen to burn, he tells us he felt an appreciable "decline of muscular power." The slight amount of cellular tissue in which his fat was packed (about as valuable as the sawdust with which savages mix their tallow), furnished him with a poor supply of structure-pabulum, and he may very well have gone into raptures about walrus flesh, raw or cooked, if it would only save his body from the burning. Like the Maine experience, his theory was formed under forced circumstances. Highly, however, as he lauds the raw "pachyderm," there is but little tempt-

ation for us to adopt it in this region, as he calls it "a glorious meal, such as the compensations of Providence reserve for starving men alone."

The practical deductions from the occasional festive habits of the Abyssinians, who it seems eat both raw and cooked meat, are not at all unfavorable to the nutritious superiority of the latter. Not unlikely, as they advance in civilization, and become acquainted with M. Soyer, if not with the laws of physiology, they will adopt in full the experience of civilized man. By that time, it is to be hoped that this science will have settled all about the "digestibility" of fat pork, the fat of boiled bacon, &c., if the preceding condensed view of its teachings be incorrect.

Something more than has already been adduced, it would seem, is wanting to justify the recommendation of raw meat, in preference to that which is cooked, for men in health. Every now and then impressible minds are awakened to the possibility, perhaps probability, that the world always has been, and is going on wrong; but still it goes on, in this connection, in the old domestic orbit. It was a simple device that deprived man of the distinctive appellation of being a featherless biped, but the feathers will be stripped from many a reformer's cap before man will cease to be "a cooking animal."—*Boston Med. & Surg. Journal.*

Strychnia—Its Uses and Abuses.

This powerful alkali has figured very prominently of late before the public; and has, in certain instances, been handled, medically, in a manner somewhat remarkable. It is certainly not from any lack of caution as to its use by writers upon Pharmacy and Therapeutics that its powers have been at times very strikingly and dangerously manifested; but it is rather owing to its reckless employment or to an over-zeal in eliciting its effects, that accidents under medical management have happened. Those in the habit of prescribing it, if well instructed, know that it is second only to prussic acid in energy, when given in sufficient quantity to affect the system as a poison. A girl, 13 years old, died in about an hour from taking, by mistake, three-fourths of a grain divided into three pills; and it has been asserted that merely inhaling a little of it has proved fatal, Moreover, administered remedially, it sometimes has had an evidently cumulative action, and its effects are very likely to break out suddenly and uncontrollably, unless the greatest care is taken not to give too large doses, continuously. Yet there are instances where, from having long given it ineffectually, the practioner has become impatient and added, very slightly it may be, to the usual dose, with the result of throwing his patient into strong convulsions. At other times the increase of the dose has even been more rash. Certainly this is an *abuse* of strychnia.

We have lately heard of employing strychnia in some cases of *insanity*. We do not deny that there may instances where it is demanded—as perhaps in certain concomitant paralytic states; but we are not cognizant of any

special action that is predicated of this medicine likely to benefit the mental aberration. In a case of furious mania, recently for a short time under our observation, we learned that *strychnia* had been administered on the outbreak of the affection. We are aware that it has been recommended in certain cases of maniacal aberration—but, as we suppose, in such as exhibited the moping melancholy form, and in hypochondriacal states. We fail to see the indication of its employment in violent, active mania, in young, vigorous persons. If we mistake not, there have lately been reports of similar treatment in analogous cases ; if our distrust be only *ignorance*, we beg to be enlightened upon the point. Unless we are thus informed, we put this down as another abuse of strychnia.

It is needless to refer to the frightful and cold-blooded murders, the detailed circumstances of which have made communities tremble. In these cases, the abuse of strychnia has had its *uses*, in that it has given to the world the elaborate chemical reports and investigations required by the legal necessities of the case. These will stand as invaluable evidence. and be always looked upon as mines of information. In connection with this part of our subject, we consider it an *abuse* of strychnia, as of *any* subtle and potent poison, to have it so easily procured. Druggists should not be allowed to vend this medicine, any more than arsenic, opium, prussic acid, &c., to all applicants indiscriminately. Might not much of this abuse be done away by refusing the sale to all who do not present a physician's prescription or order ? We are aware that much has been written and said upon this point, and also that nothing, of consequence, has been done. Often these deadly articles are as heedlessly sold as the most simple remedies. The small pecuniary gain to the apothecary, levies a large debt of responsibility against him.

The legitimate *uses* of strychnia are well known. A powerful excitant of the nervous system, without any specific action on the brain, has been long acknowledged to be a very valuable remedy in certain paralytic conditions. Combined in minute doses with purgatives, it hastens and increases their action ; and it has thus been advantageously employed in some cases of amenorrhœa, or of suspended menstruation. We can testify to good service done by it in this way. As a tonic, *brucia*, the other component alkaloid of nux vomica, has been found perhaps more useful than strychnia. The latter is often prescribed in dyspeptic states, such as are accompanied by pyrosis and gastrodynia. Testimony is strongly favorable to its curative effects in asthma. Externally, its employment for amaurotic troubles has been extensive.

To recur once more to the abuses of strychnia, or, which amounts to the same thing, of the nux vomica, we cannot refrain from alluding to one which, in view of the strength and unmanageable nature of the agent, should be represented to the too credulous public in the way of caution. There are those who, by the necessity of their position and avocations cannot have that knowledge of, and familiarity with this and other giants of the Materia Medica, which fit them for advising or regulating their use. Still, very many, in every community, are willing to take, from such unskilled persons, compounds containing unknown amounts of strychnia, &c., &c. Thus we have *soidisant*

or retired clergymen advertifing that they will furnish a prescription for a preparation containing the active principle of St. Ignatius' bean, and the directions for using the same. All such tamperers with human health and life are accountable to higher tribunal than any earthly one, and those who aid and abet them must bear them company thither. It being quite sure that the adoption of these quack remedies by the people, only brings the honest physician more patients, we shall not be accused of covetousness in protesting against them. We do not aspire to coerce people, even by argument and the exposition of blood and unwarrantable assumption that seeks to medicate —or rather to poison them—they are free agents, but certainly in no other affairs do they act so inadvisedly or expose precious interests so recklessly as in the care (as they understand it) of their health.

The proper uses of strychnia, as of all medical agents, are only thoroughly known by the educated physician. Why does any one desire—or dare—having the manifest peril in view which its improper employment implies—to entrust its administration to the unfamiliar—the adventurer—or still worse, if possible, to their own judgment ?

And we even commend to Legislative consideration the dangers constantly attendant upon the unrestricted sale of medicinal articles, a fractional part of a grain of which sometimes takes life more quickly than the knife or the bullet. The facility of procuring such materials arms the unprofessional murderer quite as surely, if less covertly, than it does a PALMER.—*Boston Med. & Surg. Journal.*

SELF-STULTIFCATION.

Homœpothists, in this country at least, have hitherto contented themselves with sly and cautious inuendoes, circulated secretly, and retailed among the families they visit, in disparagement of medical science as held and taught by the regular Faculty, and they have for the most part discretely refrained from trusting themselves in print. One of their number has ventured to appear before the public, in a pamphlet of some thirty pages, a copy of which has fallen into our hands. It is entitled "Observations on Membranous Croup with cases, by George E. Belcher, M. D., New York.

On reading it we are constrained to say, that the author betrays an utter ignorance on the subject on which he presumes to be a teacher, to say nothing of his lamentable deficiencies in philology, and his frequent employment of technicals unknown to any of the languages of the earth. These latter defects would be insignificant, however, if he had anything to say either novel or useful, on the important topic upon which he has undertaken to write.

In the first place, it is manifest that he does not know what Croup is, but is hopelessly ignorant of its *causes*, its *nature*, its *source*, its *symptoms*, its *complications*, its *indications of cure*, its *remedies* and its *dangers*. Of course he fails in its *definition*, blunders in its *etiology*, ignores its differential *diagnosis*, mistakes its *symptomatology*, is wholly obvious to the *tissues* involved, confounds it with other diseases essentially different from Croup, and by necessa-

ry consequence, proves himself to be a "medical know nothing" in his relation of cases and their treatment.

A meagre report of forty cases accompanies the pamphlet, twelve of which are admitted to have terminated *fatally!* a ratio of mortality (thirty per cent) which, with such cases as these were by his own showing, should write the epitaph of any physician of *any* school, who did not forthwith abandon so unsuccessful treatment. But every reader of the pamphlet will percieve that many of these cases, so far from being "Membraneous Croup," were not even Croup at all, and would have recovered under any skillful mother's or nurse's domestic treatment, if the Homœpath had only *whistled* every time he gave his globules or dilutions.

To demonstrate, in detail, the truth and justice of our wholesale imputations of ignorance against the author, would only require the transfer of his pamphlet to our pages. But as our space is otherwise occupied, we can only allude to a few features of the paper, which must suffice.

And first, listen to his *definition:*

1. "Croup is essentially an inflamation *(or affection)* of the air passages, with hoarseness of a peculiar character, complicated with Laryngismus."

This is "clear as mud," and false as it is clear. Croup is *essentially* TRACHITIS, *with fever*, and to call any other "affection of the *air passages*" by this name is a misnomer.

"Laryngismus" is another and different affection, nor is it a necessary complication, as here represented. It is most frecquently a spasmodic "affection," dependent upon the extension of the irritation, by contiguous sympathy from the tracheal tissue; or it may be Laryngitis, and wholly distinct from the Croup. The definition fails to make the necessary discrimination, and is worthless, besides being false.

2. And now for causes of Croup. These are thus enumerated, viz:

"A *slight* catarrh, *over play*, *gastric* irritation, or *any* other cause which induces congestion of, or renders tumid the air pussages."

Neither of the causes named are capable of exciting Croup, "or rendering the air passages tumid," and this latter is not Croup. We shall presently see what "air passages" the author inspects in Croup.

The "posterior nares," "fauces," "tonsils, pharynx, and lateral edges of the tongue," or "perhaps near the orifice of the parotid duct," these are the "air passages" which the author dwells upon as symptomatic of Croup, and he even describes tha exudation as "limited to the buccal cavity and fauces." Hence, in the cases he describes and calls "Croup," he says that he found "sore throat, the fauces and tonsils red and inflamed, obstructed nostrils, tongue coated with exudations of whitish yellow, extending to the tonsils, fauces," &. and adds that "the child has fever and sore throat, the fauces are red, resembling that of Scarlatina simplex," &c.

It can scarcely be necessary to quote farther in proof that the author confounds catarrh, quinsy, canker sore mouth, scarlatina, putrid sore throat, &c., with pharyngeal, laryngeal and tracheal inflamation, and calls all of them *croup*. And this when Croup is not attended by any sore throat, as all practical men know, until, as in a few rare cases, the inflamation extends from the trachea to

other tissues, and in some cases ends in œdema of the glottis, one of the most fatal results of Croup, and one of which the author manifestly knows nothing, and for which he and his school have no remedy. To look down a child's throat, and seek for soreness and redness of the fauces and tonsils. or to expect these symptoms in sudden attacks of Croup, betrays an utter ignorance of the disease, and an equal incapacity for its treatment. It is only in advanced and chronic stages of the disease that its ravages are visible, and are then secondary sequela, and complications, wholly distinct from Croup, and calling for wholly different trea ment.

4. In the treatment of Croup, this Homœpath directs the fcllowing formidable list of remedies, viz :

"*Acconite, tartar emetic, stibium, spongia, hepar-sulph., sulph. acid, merc. dulcis, arsenicum, cantharides, potass-bichrom, carbo-veg., merc-protoiuide, bromine, belladonna, bryonia, kali bromid, tinct. iodine, prusus l. cerasi, rhus-tox, cololynth, nux vomica, chamomile, china, tinct. of opium, phosphorus!* " *&c.* and in his bad cases calls to his aid the topical application of the *nitrate of silver!* with a sponge probang, by a convenient proxy, in addition.

It must be confessed that the infinitesimal *doses* he uses, of all these multitudinous drugs, affect the patient no more than would *a mark made upon his cradle with a piece of green chalk;* and the disease is left to its fate. Yet precious time is lost, during which the curable case becomes incurable, and hence such practice must of necessity multiply the victims of Croup. And this report of cases proves that those who escape are left to suffer for weeks and months with anginose and other chronic sequela, when under rational practice all these might be averted.

But enough has been said to vindicate our reprobation of the pamplet, and the ignorance as well as presumption of its author in presuming to teach any body the art of healing, of which he knows nothing.

But what will be the surprise of the reader when he learns that this pretender complains lugubriously that a member of a "select society" called the "N. Y. Academy of Medicine," felt "bound in honor not to consult with him!" We have shown enough to prove that such consultation would have been a farce, and worse, a conspiracy to obtain money under false pretences, if *any fee* was to be charged by either. We honor the honesty of the "good physician" and the "select society," he represented, especially in these degenerate days, when the fee is often preferred to the dictates of professional duty, and conscience itself becomes the victim of "moral insanity."

No fee could tempt ns to consult with the author of this pamphlet, no matter to what school he might belong, and such will be the professional judgement wherever it may be read.

The following disgraceful paragraph is the only citation from the pamphlet with which we will further polute our pages. It is a choice specimen of the whole performance, not only in its ignorance but in its coarse vulgarity. It is the report of a case on the 17th page.

A delicate infant, not over 9 or 10 months of age, of a delicate mother, in the last extremity of Croup, with grayish white exudations lining the buccal cavity, tongue, throat, &., had been attended by a very 'regular' physician, who

had repeatedly vomited and cauterized it, blown powdered alum into its throat, rubbed it with nasty liniment; in other words, had done every thing that could be done. I refrained myself from expressing any disapprobation of such, 'scientific treatment,' but at the same time could not help thinking, that any wise-head of the strictest sect of 'rational' physicians would in sympathizing consultation have sagely noded approbation; and yet have been horrified at a suggestion to apply a gentle specific medicine. I gave it Potass bicrom., first in solution, a small tea-spoon every half hour; but the child could not stand such 'poisonous' treatment, and died in a few hours."

This is a vile caricature, in lieu of a scientific "report of a case," and its irony heartless "enough to make the cheek of darkness pale." If the case itself be not a pure fiction to eke out the list, as we suspect, the story itself bears internal evidence of falsehood, while it betrays toward the profession the malignancy which fabricates calumny to serve its resentment. We content ourselves with pronouncing the sneers at "scientific medicine," the "regular" and "rational" physicians, &., and especially the treatment ascribed to such, to be a base and unprincipled libel upon our profession. Surely ignorance and impudence can no farther go.—*Medical Gazette.*

Landolfi's Treatment of Cancer.

M. Landolfi' mode of treating cancer having gained considerable notoriety in Austria, he repaired some time since to Paris, in order to induce the Surgeons of that capital to endorse the favorable opinions expressed by some of the Vienna practitioners. The French Hospital Surgeons accordingly appointed a committee of their body to examine into the ability of the claim, and this was done by assigning M. Landolfi a certain number of patients at the Saltpetriere. The committee, after watching the results of his treatment of these cases, has just made its report, and the following are the conclusions arrived at. From these it would seem that the remedy is destined to fall into the oblivion that has entangled so many of its predecessors.

1. M. Landolfi's method is made up of both local and internal treatment.

2. The latter, which consists in the administration of the chloride of bromine does not possess the slightest special therapeautical value in the treatment of cancer.

3. The local treatment consists in the application of the following caustic: Chloride of bromine, 3 parts; chloride of zinc, 2 parts; chloride of antimony, 1 part; liquorice powder, 1 part.

4. Of these substances, the chloride of zinc and the chloride of antimony, have been long known and employed as caustics. These two chlorides combined in the same proportions as in Conquoin's caustic, form the only portion of M. Landolfi's preparation that is really active.

5. The chloride of bromine only acts by raising the epidermis, and exposing the denuded part to the action of the other two chlorides, a result easily obtained by any vesicatory applied just before employing Conquoin's paste.

6. M. Landolfi's preparation is, in fact, only this caustic masked by a coloring and odorous body, which, although it leaves the causticity unimpaired, destroys the precision of application. The chloride of bromine has only spoiled the mixture by rendering it fusible, and more difficult to manage, and much more uncertain in its results.

7. As the caustic so modified does not secure the patient from erysipelas or consecutive hæmorrhage, it can be no longer affirmed that its employment is exempt from danger.

8. Infinitely more painful than most others, this caustic induced most severe suffering, which, in general, lasts for six or eight hours, and may be prolonged for more than twenty-four hours. Opium and other naroctics are powerless against these pains, while their duration forbids our even thinking of employing anæsthetics.

9. The mode of application is quite vicious, and opposed to the rules of art. In place of attempting to at once destroy the cancerous tumor, M. Landolfi attacks it by partial and successive applications—a necessary consequence of employing a caustic the extent of the action of which cannot be calculated.

10. These successive applications, repeated on some patients fifteen or twenty times, induce a total amount of suffering hitherto unheard of.

11. They prolong the treatment indefinitely, and infinitely delay cicatrization.

12. The incessant irritation thus induced is of a nature to favor a relapse, as experience has only too well shown, and all who are imbued with sound surgical knowledge.

13. This method, applied by the inventor himself to nine cases of cancer of the breast and three cases of cancroid, has given the following results:—Of the 9 cases of cancer of the breast, 2 have died, 4 have suffered a notable aggravation of the disease, while in 3 cases in which cicatrization took place, the disease immediately appeared; that is to say, in no case did a cure result. Of the 3 cases of cancroid, a cure took place in 1; in another there was cicatrization with re-appearance of the disease, and in the other an exacerbation took place that necessitated the amputation of the limb.

To sum up, M. Landolfi's method can only be applied to certain cancers; it is more painful and more uncertain than several other modes of cauterization; and it is, in particular, inferior to Conquoin's method, of which it is only an altered copy. Like all other methods of treatment, it may succeed in destroying certain tumors and cicatrization may follow; but it is quite powerless for the prevention of relapse, which it would seem rather to provoke, and so far from forming a step in advance, it adds but another to the illusions that so abound in the history of cancer.—*Med. Times and Gaz.* from *Bull de Therap.*

ON THE EMPLOYMTNT OF CHLORATE OF POTASS. BY M. ISAMBERT.

In this paper, M. Isambert, after giving the history of the employment of the chlorate since its discovery by Berthollet, its disuse, and recent revival by Hunt and others, state that he has of late investigated its therapeutical action in M. Blache's wards at the Children's hospital, and its physiological effects, by experiments upon himself. Passing over these latter, we present the conclusion he has arrived at in regard to its medicinal employment.

1. *Gangrene of the mouth.*—On carefully examining Mr. Hunt's observations, he considers it very doubtful whether he always had to do with true gangrene of the mouth, having rather confounded this affection with ulcero-membranous stomatitis, in which the effects of the chlorate are truly remarkable.

In two cases of gangrene he did not find it very serviceable; and West, who carefully distinguishes between the two affections, seems to have come to the same conclusion.

2. *Ulcero-membranous stomatitis.*—This term, adopted by Rilliet and Barthez well explains the nature of the affection, there being, in fact, both ulceration and the formation of false membrane present, the one predominating in some cases, and vice versa. It is a most obstinate affection, having no natural tendency to a cure, and being liable to a relapse. West first employed the chlorate in this affection, and his success with it has been amply confirmed by Blache, Herpin, Bergeron, and others on the continent. Eight cases which have occurred to the author speak equally favorable. Relapse may, however occur, though far seldomer than under any other remedy; and it should therefore, be continued for some time after the fall of the false membrane.—The chlorate, too, is powerless against alveolo-dental pyorrhœa, or ulceration of the borders of the gum, with purulent issue from the alveoli, on pressure being made upon the gum. The mean duration of treatment of these eight cases was from three to five days for the production of the fall of the membrane, and five to ten for a complete cure. When the cure was longer delayed, relapse had occurred, or the alveolo-dental pyorrhœa was present.

3. *Aptha.*—The vesiculo-ulcerative state of the buccal cavity to which this appellation is now confined, is in general a very mild affection, and curable by simple means. Sometimes, however, numerous and confluent humors ulcers produce much pain, impede feeding, are very tedious in healing, and induce constitutional disturbance. In a case of this kind the chlorate effected a rapid cure.

4. *Muguet.*—M. Legroux has tried it in several cases of epidemic muguet at the Hotel-Dieu, but without any favorable result. During the trials it was found to pass rapidly into the milk of the nurses, and in this way it may be administered to infants.

5. *Scorbutus.*—M. Fremy has found the medicine of use in this disease; and thus we find the moderns returning by another route to one of the first affections the chlorate was recommended for on the theory of deoxidizing the the salt in the economy.

6. *Diptheritis.*—Observations commenced by M. Blache, and continued by the author, leave no doubt as to the utility of the chlorate. In this affection

there is, however, every gradation, from the most simple to the most malignant form, a sign of most unfavorable augury being found in the swelling of the parotid and deep-seated cervical glands—enlargement of the submaxillary glands occurring in even the simplest forms. Of thirteen cases, the chlorate was exclusively employed in four, and the cure was rapid, the cases being mild ones. In two, although cauterization with nitrate of silver was employed at the beginning, the success was attributable to the chlorate. In two others, cauterization was simultaneously employed, but the cure was not more rapid than in the others. The ninth case was a very severe one following scarlatina, and the patient was cured by the chlorate and quinine, without the aid of cauterization. The four others died, but they were cases of a very grave description. The chlorate is, therefore, no heroic remedy, always curing angina miligna, nor is its action immediate; for, although it appears in the saliva a few minutes after administration, it requires at least twenty-four hours, and usually three or four days, before it can effect its purpose. It should, therefore, be commenced with early.

7. *Croup.*—The success attendant upon the chlorate in diphtheritis naturally led to its employment in croup. The author relates four cases in which the chlorate seemed to have succeeded, and refers to eleven others, in which tracheotomy was resorted to also, whether because the medicine did not seem to be taking effect with sufficient speed, or that tracheotomy having been already employed, it was given as an adjuvant to prevent the reproduction and extension of the diphtheritis. Of these eleven cases, some of which were very severe, there were eight recoveries and three deaths. Between the first of January and the end of March, 1856, tracheotomy was performed in M. Blache's wards, fourteen times, with nine recoveries and five deaths, all of the children taking the chlorate either prior to or subsequent to the operation, If this success be not due to the occurrence of a run of lucky cases, which occasionally occurs in practice, the result is remarkable, as the proportion of recoveries after tracheotomy, at the same hospital, has averaged during the last six years has been but one in four or five. When tracheotomy has been performed, the use of the chlorate is especially indicated, where there is a tendency in diphtheritis to extend to the bronchi, pharynx or nasal passages. It should be combined with expectorants, and considerable doses given.—*Gaz. Medicale.*

The Valerinate of Ammonia in the treatment of Neuralgia.

The statements respecting the power of this new agent in the treatment of neuralgia has excited considerable interest among medical men in this city. Its value is being very freely tested by our most intelligent and judicious physicians, and we expect to be able to report their experience at an early day. To a limited extent we may say this experience already confirms the happy results reported by Declat in the French journals. We stated last month in a note from Dr. Bruhl, that the valerianate of ammonia was being prepared

by Mr. Finnel, Druggist, cor. Third and Broadway, in this city. Mr. W. J. M. Gordon is also preparing it, and we presume all our best druggists will have it on hand if the experiments now making prove at all satisfactory. We may be pardoned for repeating the formula for its use. The valerianate, of course, is a salt, and it is administered in aqueous solution in the proportions of half a drachm to the ounce of solution ; dose, a teaspoonful three times a day. We suggest, however, as valerianic acid saturated with ammonia, is a more convenient preparation than the salt, that the former be adopted as the basis of prescription, the remedy would be equally reliable and convenient for use, and would save the druggist some extra manipulation. It is, however, desirable to have a uniformity in the preparation, that we may not prescribe with confusion. We propose, therefore, that our apothecaries keep on hand an aqueous solution, each ounce of fluid to be equivalent to drachm ss. of the valerianate of ammonia, and to be known as the *Liquor Ammoniæ valerianatis.—Cincinnati Med. Observer.*

Medical Fees.

The subject of fees for professional services seems lately to be attracting considerable attention among our brethren : We have read very fitting and timely articles upon it in a number of our exchanges. We propose, therefore, to improve this occasion with a few remarks upon the same topic. These remarks, however, are not intended to apply to such professional services as are necessarily of a charitable kind. God forbid that the humane, benevolent character of our noble order should ever be lost sight of ! or that ever a true physician should feel at liberty to refuse his attentions to any from their inability to tender the honorarium. What we speak of now has simply reference to such service as we expect to regard at any time as a proper subject of remuneration.

We think it of easy demonstration that, in view of the capital invested, the time expended, the exposures endured, and the money received, the physician is the poorest paid member of the body social or politic. We make no exception—we speak with due reflection when we say the *ditch-digger* receives better pay. And then, as has been properly remarked by the *Med. and Surg. Reporter*, "small as doctors' bills are, it is considered a merit, by a great many, to cheat them out of the whole or a part of their hard earnings ; and yet when a doctor has money dealings with others, he is expected to pay promptly to the uttermost farthing." It is generally agreed that the remedy for this trouble is in the hands of the profession, and that it only needs harmony of action to secure it. There is no doubt but that we shall accomplish much more for ourselves individually, when we at last shall come to recognize the truth that the medical profession, as a craft or fraternity, is dependent for the prosperity of its individuals, upon the prosperity of the whole. The remedy that is generally suggested for relief consists in a revisal of our fee bills, conforming them to the advanced rates of living We do not doubt but in many places this ought to be done ; indeed, in some

localities we know the fees are absurdly low. But still, we think the evil is not so much in *the rate of our fees*, as in the *way we collect them*, or rather *don't collect* them. In almost every department of business, the credit system is being abolished. The consequence is, that tradesmen adopting the cash principle can afford to sell the wares at a reduced rate, and make a greater profit. We have no doubt the public would find it to their interest to adopt the same plan in compensating their medical advisers. On this point we call attention to the remarks of our intelligent Boston correspondent, in his letter published in the February No. of the *Observer*. He gives an instance of a physician in that city, whose practice, too, is among a class proverbially the worst pay for doctors of all others, who has adopted the cash system, and is becoming rapidly wealthy. That is the plan pursued by the *Inhalers*, *Magnetic-Bath doctors*, *Fit Curers*, and the like, and they "clothe in purple and fine linen, and fare sumptuously."

We say, then, we believe the remedy consists rather in a revision of the credit system, than in a revision of fee bills. Transient persons, office prescriptions, and the like, should, at any rate, be cash. Regular patrons should have their bills presented as soon as the treatment of a case is completed. The service is then fresh, and gratitude for attentions at its hight. Besides, for the *most part*, there is no hardship in this arrangement to the public. Make our arrangements accordingly, and it is quite as easy to find money for a reasonable amount of medical as for our weekly marketing. What locality will set a goodly example in this matter, and demonstrate its practicability and mutual benefits? A city like Cincinnati might do so with propriety. What say you, brethren?

This *sanitory reform* must necessarily be a gradual work, we suppose, but we must ultimately come to it. As an individual, if we can receive *promptly*, without *delay* or *dunning*, remuneration for our services, we should be contented with present fees.—*Cincinnati Med. Observer.*

In this State the average fees in country practice are fifty cents a visit; twenty-five cents a mile for travel; twenty-five cents for prescription; five dollars for obsteteric fees, and from three to five dollars for consultation. Verily, a reform is needed, in this respect, in Michigan. How shall that reform be effected?—Ed.

Etherization in Convulsions.

Dr. N. J. Knight communicates to the *Boston Medical Journal* his experience with ether in controlling convulsions, and especially the convulsions of children, as follows:

"I think etherization, in cases of convulsions in children and adults, is not fully known and appreciated. To every case of teething convulsions, in my practice for the last three years, I have administered the pure sulphuric ether, and immediate restoration has followed with the most pleasing effect.

A severe case of puerperal convulsions occurred in my practice last month.

A lady who had, at three previous pregnancies, miscarried at periods varying from four to seven months, was taken with the usual symptoms of abortion, and sent for me in haste. Perfect quiet and an anodyne were prescribed; the alarming indications soon passed off, and I left. About three o'clock the next A. M. I was sent for, and found the patient recovering from a convulsive fit. Bleeding, a cathartic, cold to the head, sinapisms, to the neck, legs, etc., did not prevent the recurrence of three more convulsions in less than ten hours, when I commenced the administration of sulphuric ether, and although no more convulsions occurred, it was not until near the end of forty-eight hours that the nerves became so calm as to allow the ether to be omitted altogether. Ten days from the first attack the lady was delivered of a seven months' child, which had evidently been dead from the time of the first convulsion.

I have had a severe case of convulsions of a married lady, this week, and etherization shortly restored the patient to a healthy condition.

I consider ether really the only safe and efficient remedy for convulsions of teething children, or adults, now known to the profession. Probably the half is not yet learned that etherization can accomplish for suffering humanity."—*Cincinnati Med. Observer.*

Mortality of Boston in 1856.

During the year 1856—as we learn from the Annual Report of the City Registrar, which was more particulary noticed in last week's Journal—there were 4,263 deaths in the city of Boston, being an increase of 173 over the number recorded in 1855, but 188 below the record of 1854. The only epidemic was scarlatina, which proved exceedingly virulent during the latter part of the year, having caused no less than 362 deaths, or 8.51 per cent. of the whole number. It has been prevailing since March last, in which month 10 deaths occurred, and they gradually increased to the end of December, 115 fatal cases having occurred in that month. The greatest number of deaths occurred in children between the ages of 3 and5, viz: 96. Between the ages of 5 and 10 there were 78 deaths; from 2 to 3, 76; from 1 to 2, 72; under 1, 28; from 10 to 15, 8. Of all the deaths from this cause, 95 are reported as of native birth, 28 were foreign born, and 237, or 66 per cent. of the whole number, were children of foreigners. The last two classes make 73.75 per cent. The localities in which the disease prevailed most extensively are such as we should expect, and show that an elevated situation, cleanliness and good habits afford a strong protection against the virulence of the disease, as surely as filth, want of ventilation and a low situation, favor its prevalence and severity.

The deaths from *consumption* last year were 760 in number, being an increase of 25 over last year's record, and making 17.87 per cent. of all the deaths. Of those dying from this disease, foreigners make 63.81 per cent., and as might be expected, the greatest number of victims were from those quarters of the city which are chiefly occupied by the ever-crowded, ill-ventilated dwellings of the Irish, which people furnished 52.63 per cent. of the entire number.—*Boston Med. & Surg. Journnl.*

NEW PUBLICATIONS.

LECTURES ON THE PRINCIPLES AND METHODS OF MEDICAL OBSERVATION AND RESEARCHE FOR THE USE OF STUDENTS AND JUNIOR PRACTITIONERS — By THOMAS LAYCOCK, M. D., F. R. S. E., F. R. C. P., Professor of the practice of Medicine, and of Clinical Medicine, in the University of Edinburgh, etc. etc. Philadelphia, Blanchard & Lea, 1857.

To the medical investigator, who would be philosophical, and who has accustomed himself to observe and to think, the work before us, will be scarcely less than a cyclopedia— a treasury of logical professional thought, and reasoning. Appropriated to a heretofore unoccupied field of research, and designed to fill an obvious hiatus, in medical literature, it may in truth, from its discursiveness of reasoning, and its copiousness as regards number and variety of topics, with great propriety be denominated *multum in parvo.*

In all the past history of our profession, just such a work from the pen of some one competent to the task, has been greatly needed, as a source of encouragement to him who would base his learning on the sure foundation of scientific deduction, and as an aid toward the consummation of the purpose by which he is prompted. It is not ours to deal in fulsome laudation, either of men, or their works. But in times like these, when perhaps not less in the professional, than in the literary world at large, haste and superficiality are made to usurp the place of "calm contemplation," and profundity of research, when we say in such times, and under such circumstances, we meet a production, that bears the impress of an honest desire to advance the real interests of our science, which seeks to expunge long cherished falacies, and give truth her legitimate prominence, we hold that, to speak out, frankly and fearlessly the gushing sentiments of honest approval, (the fastidiousness of certain "*bashful*" editors, to the contrary, notwithstanding,) is neither to depart from the proprieties of life, nor to insult the good sense, of an intelligent public. Nor would we plight our fealty to an assumption that it is not only the province, but the imperative duty of the periodical press, to speak in terms of unequivocal criticism— a criticism that is often founded, not so much upon profound knowl-

edge, either of the matters in question, or an intimate familiarity with the drift and doctrines of the author, as upon personal spleen and caprice, or an inordinate cacoethes carpendi. What! would these wiseacres, these would-be-paragons in scientific lore be ever looking on the lurid aspect of life—has not the world a superabundance of gall and bitterness, allready? Ah! my confrerres, let us contemplate, at least, from time to time, if not constantly, the sunny side of the moral scene. Let the amiabilities of our nature, which, at best, is not a whit too amiable—the amenities of life predominate. Let us contribute our little share towards this desirable consummation. Let us be benevolent, as well as rigidly, exactingly just—in a word,

> "Let us laugh where we may," play critic when we must;"
> "But justify the ways of God to man."

That the reader may appreciate the real character and worth of the production, it will be necessary, only, to present the author's observations on a few points.

And, first, of clinical medicine he remarks, "we are met to day in order that, for the next three months, we may study, and practice medicine together, at the bed-side of the sick. To us all these pursuits are of singular importance. To you, clinical study is the culmination of your academic career; and, upon the habits you may form, and the doctrines you may imbibe, much of your success and happiness in the practice of your future profession, will depend." Again. "I need hardly say one word in commendation of clinical teaching. It is of sigular advantage in every way. To the sick poor, especially valuable, because it secures to them at small, if any cost, to their feelings, the most careful consideration of their case. To the public, not less advantageous, because it is the best means of advancing medical art, and training students into good practitioners; to the student: it affords him the opportunity of meeting disease, face to face, not easily met with elsewhere, and, therefore, of vital importance to you, since it enables you to secure the great object of all your studies. That object is the acquisition of those qualities, which, included under the terms professional skill and tact, constitute the surest means of professional success."

Now, how unlike, are the views of our author, as well as those of other eminent men, and especially of the learned, and ardent Latham, the flippant, yet puerile notions issued from a certain source, with an assurance that verges towards arrogance, and would seek to give a tone and a direction to the whole system of medical education, throughout a vast region of country, to the effect that clinical instruction, as taught and managed in our country, is altogether of minor consequence. How unlike that other notion—if it (clinical instruction), be desirable at all, it may be best pursued by students, in association with their preceptors, scattered all over

the country. *In our country!* What is the significance of that expression? Is it designed to traduce the character of the *institutions* of the country. To cast odium on the reputation, influence and hard earned fame of the learned men who have long been engaged in this important department of medical teaching, the burning and shining lights of our own beloved country? Is it to attach an invidious consequence, thereby effecting "wisdom, above what is written" — to foreign institutions foreign usages, in derogation to our own? We pause for a reply. But further—pursue clinical research in the office, and in association with the preceptor, a country practitioner, who, though he may have learning and skill of an enviable grade, nevertheless, sees but few patients, comparatively, and these, too, under the most unfavorable circumstances for close observation of the phenomena of disease, by a young man who has scarcely learned the alphabet of professional nomenclature. But we dismiss the subject as too preposterous to merit the dignity of a serious refutation. We leave it to the silent indifference of an enlightened medical public

But the writer observes: "We are met, to-day, in order that, for the next three months we may study and practice medicine together, at the bed side of the sick." This sentence is pregnant of meaning. And how will it be received and appreciated by the reflecting non-professional reader, compared with that other, no less puerile proposition, emanating, it is believed from the same fount of immaculate wisdom, viz: the appointment of a *single*, perhaps remarkably experienced professor, to the exclusive charge of a certain hospital, for the purpose of imparting clinical lore, in all the departments of professional practice, to the advanced class or classes of medical students. The language of our author implies emphatically, at least, the idea of rotation, in the important duties of the hospital practice and clinical teaching. We think it implies more. That each department, as *practice, surgery and mid-wifery*, has its proper officer, who, for the period of three months, is responsible for the faithful performance of all the duties that belong to it. It implies most certainly, division of labor and duty, rotation in office, and diversity of professional attainment—in a word, it implies *professional progress.*

Take another example. "*Fallacies of Anatomical Etiology.* A fallacy in the determination of causation is very common in researches into the anatomy of disease, certain observed conditions of structure are discovered after death, and it is, at once, inferred that these are the *causes* of the symptoms observed during life, or, in other words, constitute the disease. In this way, the terms, phthisis, and consumption, originally used to express a wasting or diminution in bulk, of the living tissues, have come to signify a certain kind of abnormal, structural change, viz: so called characteristic deposit in living tissues, or tubercle. And, in as much as it is usually found that the lungs are the seat of this deposit, pulmonary phthi-

sis and tubercular phthisis have become convertible terms. But in truth, the disease, etiologically, is that on which both the wasting and the deposit depend, that is to say a morbid condition, existing antecedently to any perceptible, structural change, and without which, neither the true phthisical tubes, nor the true tubercular deposite, will occur. This fallacy is of constant occurrence in anatomical researches into disease, and by insensibly leading the minds of practitioners, rather than the processes of morbid action, has seriously checked progress of practical medicine."

Thus significantly, and to the purpose in view, our author discourses on this important subject: and the reasoning is so plain and the principles so obvious that the veriest neophyte cannot fail fully to comprehend them, while the man of experience and of reflection will at once be reminded of the frequency that his own mind has been directed in the same channel; that he has thought the same thoughts, and yet will be induced to wonder that he has not given them form, and offered them to the world.

The physiognomy of disease, and of those conditions of the economy that impress a remarkable proclivity towards a particular disease, or induce a characteristic grade of action, diatheses, are considered at length and with much care.

Of the physiognomy of the cancerous cachexia, the following is his mode of remark:

" This may arise in any diathesis or cachexia, but it appears to be most frequently associated with the strumous, about middle age, or later. The deposite which characterizes it usually occurs in organs which are exempt, in the earlier periods of life, from tubercular deposite. The characteristics are, therefore, as to the features, rather of the strumous cachexia than the arthritic. The complexion is muddy, waxy, or sometimes transparent; the expression of the countenance gloomy; the temper captious and melancholy; the muscular power enfeebled; the appetite impaired; the body progressively wasted; the nights sleepless. It attacks middle age."

To the junior practitioner, and the student, such a summary, not only of facts in pathology, but of the assemblage of external aspects, which characterize this cachexia, is invaluable, whilst he who has toiled many years, will find a revelation of observations, involving important truths, which he has already recognized, and, perhaps, elaborated into aphorisms, or in regard to which he has been culpably remiss.

Our limits will only allow us to refer to a few other points, which the author has treated with characteristic acumen, and clearness. And among numerous others, his instructions as to the mode of procedure—what to observe, and how to observe, in the examination of the sick; his clear and analytical views in regard to the use and value of " clinical aids to the senses," as chemical tests, specula, the microscope, stethescope, &c., and the fallacies to which they give rise, even in the hands of the most practiced,

and, therefore, the most expert; and the learned discussions in reference to the nature and genius of the numerical and analytical, or strictly inductive modes of medical research; their utilility collectively and their individual advantages, as well as the fallacies, connected with each respectively. These, with many other topics, treated either individually or incidentally, are condersided with a definitness of purpose, a stretch of thought, an explicitness of expression, and a clearness of logical deduction, that indicates the profound scholar, the true medical philosopher. We indulge the hope that the work not only may find a place, ere long, in the library of every physician who appreciates the truths of science, but that its teachings and doctrines may be made available, by many, to the progress of rational philosophical medicine.

Its style of execution, as a whole—typography, paper and binding—all are in accordance with the finished workmanship of the publishing house whence it emanates. K.

To be found at Raymond & Selleck's in this city.

A New Medical Journal.

We have received the second number of the "*North American Medico-Chirurgical Review*;" a Bi-Monthly, edited by S. D. Gross, M. D., Professor of Surgery in the Jefferson Medical College, and T. G. Richardson, M. D., Professor of Anatomy in the Medical Department of Pennsylvania College, Philadelphia.

This Journal now occupies that space in our Medico-periodical literature, which was so well filled by the "*Medical Examiner*" and the "*Louisville Review*."

The names of its editorial paternity, furnish the most reliable assurance against loss, in the change, which this combination has wrought. If any higher guarrantee is required, it will be found in *its one hundred and sixty pages*, made up of "Analytical and Critical Reviews," "Original Communications," and its accomplished Editorial Department.

Its editors are so strongly imbued with that spirit of independence which would vindicate and guard the claims of *American* medical literature, that we are almost led to wonder why they should have borrowed even the prestige of a *name*, however long it had sustained and honored *English* medical literature.

But judging from the number before us, this Journal will be a worthy representative of the progressive Medical talent of our country, and if it recieves that patronage which the labor upon its pages so richly merits its editors and publishers will be duly rewarded.

Published by J. B. Lippincott & Co. Price $4,00 per annum.

EDITORIAL AND MISCELLANY.

HOME FROM THE WARS!

After men have reached their dotage and become garrulous, the earlier incidents of life are the idols of their memory, and if by chance they "have been in the army" they improve every opportunity to relate some anecdote connected with their "military life-time." If from want of success or reverses of fortune, they are compelled to devote their remaining energies to daily toil for subsistence, this same "*when I was in the army,*" is apt to become the talisman of their claim to popular regard, and public favor. When such men are found in the ranks of our profession, this empty distinction is the substitute for real acquirement, and when they break that silence which passes for wisdom, it is to tell, facetiously, some story "of olden time" "when *I* was in the army." This for the most part—with an "urbane" and dignified exterior—has been once too often a passport to the highest honors of our profession. But thanks to "old Time" and his "sickle," such distinctions belong *only* to the exterior, while, long years of studious devotion to our science, earns the reward of a name that *lives* long after army distinctions have vanished, and been forgotten.

The leading editorial in the March No. of the *Peninsular Journal*, furnishes a good illustration of that senile vanity which has been cherished and cultivated by the tinseled honors of a little *military glory*. After exhibiting his familiarity with the the *theory* of shooting "great guns," he tells a *story* which he *says* happened in his boyhood, and formed a part of *his* "*sporting experience.*" Now we should regret the necessity of charging the "urbane" senior, and president of the National Medical Association, with such a *low form of plagiarism*, but this same story has been told and illustrated in *comic alminacs*, and long since credited to the venerable *David Crocket.* Several attempts have been made to give the story an appearance of originality, by locating the place where, and stating the time when it happened. Sometimes it has been told so as to give the *Irish brogue;* again, in the dialect of the untutored African; but now it appears embelished with the profanity of the French idiom. In order that

this "old army surgeon" may have all the benefit to be derived from what he claims as original, we will give the story in his own language:

"One day, it was the last time I saw him, and I hardly know now whether to weep over his memory or to laugh at his eccentricities, he had loaded his piece with unwonted care, and taken deliberate aim at a grey squirrel perched high upon a beech tree. He fired. The squirrel dropped the husk of a beech nut, sprang to a higher limb, and began to chipper. My old friend exclaimed. *Sacre le diable!*—for he swore in French—*suppose you pe at dis end de gun, I no t nk you jump so.*"

This all *may* have happened; but we presume most of his readers have long been familiar with the same story. Now a few words with regard to its application, for it was intended to apply to us, in consideration of a statement which we made in our February issue, respecting the manner in which practical experiments were being made and published at St. Mary's Hospital.

In illustrating what we considered *gross* and *reprehensible assumption*, we alluded to certain facts which were given to us at Marshall. While in that village, Dr. Maniates proffered to us the courtesy of a drive about the town, and conversation having turned upon the merits and demerits of the *Peninsular Journal*, he asked if we had noticed the report of a case of Ascites, which occurred in St. Mary's Hospital, in which Iodine injections were employed. He denounced the treatment, giving us to understand that he had been induced by the report which appeared in the "*Peninsular*," to try the same remedy, and that the patient died from the effect thereof. We were so confident that such were his representations of the case, and his language and manner conveyed to us such decided disapproval of the conduct of the "*Peninsular*," or any other Journal that would practically recommend treatment without more thorough and satisfactory tests, that we felt warranted in making the allusion, even without more direct authority. We have no desire to call in question the motives which led Dr. M. to furnish amunition to load an old gun that was "once in the army," nor to enquire of probabilities, with a view to ascertain whether, after all, "high esteem and admiration" for the learned "Senior," had not impaired his memory respecting the statements which gave to us the most *decided impressions*. To say the least, however, we had a good reason to expect after informing us of erroneous impressions, and having received our pledge to publish his version of the conversation, that he would consider himself and his *injured friend* avenged of all wrongs. Notoriety thus obtained, and in such connection, can hardly be considered enviable.

R.

☞ In consequence of the illness of Dr. Goadby, we did not receive his contributions in time for this Number. They will appear in our next.

THE LAST DIATRIBE FROM THE "CITIZEN OF ILLINOIS."

In our February issue, we gave a truthful and explicit detail of the origin of our collision with the *Peninsular Journal.* It never has been denied that the senior editor of that journal made the *attack*, and compelled us, either to submit to his attempt to traduce the character and professional attainments of our senior—Dr. Goadby—or to make a justifiable defense. In the prossecution of that defense, we have made well substantiated charges, in which we have shown abundant reason for the course we have pursued. None of our readers can regret more than we do, the necessity that has compelled us to devote so much space to a local and personal controversy; and if we have never duly appreciated the character and acquirements of A. B. P., we are disposed to regard him with grateful consideration, inasmuch as he has *dismissed "the whole matter, with the hope that no circumstance will induce him to recur to it again."* This is a wise conclusion, and will, no doubt, redound more to his credit, than his voluntered service in the attempt to exhonerate his *learned* senior.

But justice to ourselves, and the vindication of truth, forbid that we should allow his *last* effort to pass, without some comment.

In making certain explanations, which some of his personal allusions badly neeeed, A. B. P. has exhibited a strong tendency to violate *some* of the ordinary rules of syntax; but inasmuch as he has made the correction, charity prompts us to attribute verbal inaccuracies to his editorial associations. Now, with regard to what he calls a reason for the origin of the *Medical Independent*, after making a patronizing appeal to Dr. Davis, evidently for the purpose of manufacturing a little sympathy for his argument, he then turns to another cotemporary, to whom he devotes the following paragraph:

Does the editor of the *New Jersey Medical Reporter* think this a great sin? If so, he must have altered his opinion, or else must think that it is very proper and quite in keeping for R. to do a thing which in *us* would have been despicable. We well remember with what indignation we read the *Reporter's* insinuations, that *we* were the author of that article, and felt inclined to say: "is thy servant a dog, that he should do this this thing?" It will be remembered that at this time we were in the midst of a controversy with Dr. D., as the exponent of the Rush Medical College, and all *honorable* men can appreciate how shameful it would have been for us to thrust such personal ridicule, founded on matters foreign to the subject at issue into the controversy.

Dr. A. B. Palmer has manifestly forgotten his *correspondence* relating to the rejection of the paper upon the "Biography of Living Medical men," and a few extracts from his letter, will enable Dr. Davis, and the able editor of the *New Jersey Medical Reporter*, to judge whether he was inclined, at that time, to say "*is thy servant a dog, that he should do this thing?*"

"You ask my opinion of the article: I think it well written—in a clear

agreeable style—the different points are well taken and sustained. I regard it a decidedly readable article, and *there is much force in its views.* There are, however, different opinions respecting the propriety of presenting before the public, biographical sketches of living individuals, who have succeeded in attracting the attention of considerable portions of men. Greely, Bennett and Barnum, have each a volume devoted to their particulars—and most persons see no impropriety in the affairs. These men have achieved notoriety with the community generally, and the community seem gratified in reading their lives.

* * * * * * * * *

Now, for my own part, I am very much inclined to your view of these autobiographies—for they very nearly amount to that. The case you have cited as an illustration of your views, (I mean the biographical sketch) is one got up, I think, with bad taste. Many may not think so, however; but if you were editing a Medical Journal, and were disposed to express your views to the profession, it would be highly proper for you to do so, as presenting one aspect of the subject, and there cannot be the least objection to any journal publishing it, that chooses to do so.

* * * * * * * * *

Besides, the article appearing in our Journal at this time, *would loose much of its general force.* It would be regarded as an attack upon an individual rather than *the resisting of a general evil.* These would be my reasonsfor declining it, at least *at present,* and preferring if it appeared at all, it should appear somewhere else. * * * * * *

I can concieve of a contingency in the future, which would render me desirous of publishing the article, either as original or as a selection."

In the first extract it will be observed that Dr. Palmer places the members of the medical profession upon the same *level* with Barnum, Bennett and Greely. These men have achieved *notoriety*, and therefore the community are interested in reading their lives. Dr. Davis, and others, had achieved *notoriety*, ergo, Dr. Butler thought the medical profession would prefer to have the detail of their lives by installments, while the subjects thereof were living. All this needs no comment from us; but it will be clearly manifest to all, that the whole tenor of Dr. P's. communication, practically endorsed the paper which he rejected. After we were convinced that the real objection to publishing the paper in the Peninsular at that time, *was* on account of the "collision with Dr. Davis," we gave the enterprising editors, at least, credit for *honorable* warefare.

Now, let us notice his reasons for rejecting the papers offered by Dr. Goadby:

"The other reason for the establishment of the *Independent* is, that we "rejected Dr. Goadby's articles on subjects connected with the microscope." This may have been a grevious sin, but if so, we must plead that it was one of the head, rather than of the heart. We innocently thought that our readers who are practising physicians—not mere curiosity seekers in the domain of insect life—men who are engaged in the relief of suffering *humanity*, not intending to establish hospitals for the treatment of sick insects—would not be interested in these papers sufficiently to read them."

This is certainly a very frank admission of the *truth*, for it was an *error of the head*, and if that same head should be charged with having sufficient knowledge of the microscope, and its practical utility, to *appreciate* the

labors and writings of Dr. Goadby—the result of forty years investigation—it could plead as "*innocently*" as when it offered the above reason for rejecting Dr. Goadby's proffered communications.

As high authority for the utility of his papers upon "The Structure and Functions of Insects," we make the following quotation from *Draper's Physiology:*

"*Here at the very outset of our science, we must dismiss the vulgar error that the physical conditions of existence vary in different tribes, and that man is not to be compared with lower forms. We must steadily keep in view the inter-connection of all, a doctrine which is the guiding light of modern physiology, and which authorizes us to appeal to the structure and functions of one animal for the explanation of the structure and functions of another. The more steadily we keep before us this philosophical conception of the inter-connection of all organic forms, the clearer will be our physiological views.*"

Dr. Goadby's public and private lectures, together with his published observations upon subjects connected with the revelations of the microscope, require no comment from us; not even a refutation of the calumnious insinuations which Dr. Palmer has so *facetiously* expressed.

But we will give our readers one more specimen of vapid sophistry merely to exhibit Dr. P's power of "reasoning *on the wrong side.*"

We do not wish to be understood as speaking disparagingly of microscopy. It is a beautiful and deeply interesting subject, and when properly conducted and applied to physiological and pathological science may be made available to the interests of the profession. But we have now so many excellent text books on the subject, that we by no means require that elementary instruction be given in a medical journal. We would as soon think of giving a series of articles upon descriptive anatomy or chemistry. It is not the object of a medical jouanal to give compilations of elementary scientific matter, and especially upon subjects so remotely connected with practical medicine. Any new discovery in this or any other department of science, might, with propriety, be recorded, but we deem elementary instruction in vegetable or animal histology, and particularly in the histology of insects, quite out of place in such a journal, even were it given by one acquainted with the general range of Natural History, and the science of Medicine."

It is very evident that Dr. Palmer is ignorant of what Dr. Goadby has written, otherwise he would never have pronounced his productions "*compilations.*" Can he point us to the same facts and principles recorded elsewhere? Many of our cotemporaries, in giving commendatory notices of the Journal have spoken of the *originality* of Dr. G's papers in the highest terms.

But Dr. Palmer thinks such matter out of place, in a medical journal; indeed! What does he mean by "*collatteral sciences*" *on the title page of his own Journal?* If *he* would not publish anything "remotely connected with practical medicine," why does he present in his March No., an article on "*Michigan Coal—Its analysis, and value for Gas.*" What has this to do with practical medicine? "*The Birds of Michigan,*" too, how is their classification connected with "practical medicine." This kind of reasoning is a little below the standard of attainment usually accredited,

even to a professor of materia medica, *in a respectable* medical school. We confess that we looked for something higher, from the Medical Department of our University, until we learned that, after publishing in his journal "the removal of an ovary complicating inguinal Hernia," Dr. P. carried the *tumor* all the way to Ann Arbor, *in order to learn from his accomplished collegue that "it might be a Detroit ovary, but they did n't find such in Ann Arbor!"*

Dr. Palmer has shown, beyond all question, that we are comparatively "young, as regards age and experience in the profession;" we claim nothing more. "*Experience* is just what ails some men;" but we hope that we should be able to distinguish between *a diseased ovarium*, and an enlarged lymphatic gland, at all events, before *intimating* that we had *probably* discovered "*a new complication of inguinal Hernia.*" we should examine the records.

We, too, here leave this subject, but if we are called upon to say more in relation to it, or in answer to those who provoked the controversy, it will be in self defense, or in vindication of established principles of medical science, which have been disfigured by the blunders of ignorance, or the arrogance of dogmatism. R.

Another Precocious Discovery.

"These men have obscured and confounded the nature of things, by their false principles and wretched sophistry."—Southey.

That same promising junior of the "*Peninsular*," who so recently, by the aid of his senior, removed an *enlarged lymphatic gland*, and after "a *cursory* examination of the literature of Hernia," did not find that a descent of the ovary was mentioned among the complications of inguinal hernia, has *again* "jumped at a conclusion." After giving a report of *three* or *four* "*operations preceded by railroad injuries*," he is led to "believe" that "it is generally conceded by most surgeons that *recoveries are the exceptions*, when amputation has been submitted to, as a result of a railroad injury." The two most obvious deductions to be made from the young man's report, are: 1st, that he is very desirous of *advertising* himself and his "senior," in a manner *apparently* legitimate and orthodox. 2nd, That his operations have been uniformly *unsuccessful.* These inferences are too well established by the sophomorical detail of his observations, to require further comment; but his egotistic assumption becomes insufferable, when from *his* comparatively meagre experience he attempts *to establish a principle* of surgery.

He says, "it seems *strange* that the nervous prostration should be so intense in all cases of railroad injuries of the extremities, and that there should be such a similarity in injuries caused by fire-arms. and even if no lesion should occur, of the condition found after severe shocks of electricity in the form of lightning."

Passing over the *elegance of diction and the gramatical construction* of this extract, we think he has exhibited a nicety of discrimination which must require more than an ordinary familiarity with the general principles applicable to mechanical injuries, as taught by our text books.

The generally accepted doctrine is that the degree of nervous prostration depends upon the severity and extent of the injury received, together with the condition of the general health at that time.

We want more than the ipse dixit of a mere solecistic tyro in surgical practice, to convince us that there is anything intrinsically peculiar in a railroad injury, that would be any more liable to defeat the conservative ends of surgery, than in a corresponding injury from any other mechanical force.

It it is by no means "conceded by most surgeons that recoveries are the exceptions when amputation has been submitted to as a result of railroad injnry." On the contrary it will be found by the testimony of all *skillfu* and *successful* surgeons that recovery in such cases is the *rule* and not the exception.

But let us analyse the cases that have been so specifically reported, and see if we can discover the cause for this want of success, where operations were "preceded by railroad injuries:" The first case *happened* to be successful, albeit the man suffered the operation while in St. Mary's Hospital, and the result must be attributed to the good condition of his general health at the time of the accident, as well, also, to the fact that the amputation was *a secondary operation.*

With regard to the four cases of *primary* amputation which were made in consequence of the accident, on the Great Western Railway, a few years since, we have the best authority for saying that in three of the cases the operations were made before proper reaction had taken place.

The last case mentioned was M——, who was severely injured in the foot by the cars of the Michigan Central Railroad, in July last, having stepped out of the cars when asleep.

"*He lay on the track all night*, and the next day was taken to the Hospital. *Slight reaction took place.* His leg was amputated below the knee during the day. He died, surviving the operation only six hours."

For some reason the age of this patient was omitted, and, as the facts show, is a very important item—he being about *seventy years* old. Now what would a little good "common sense" lead any man to predict, as the result of such an operation, made under such circumstances?

Our interest in this subject has led us to examine the surgical notes of those who have had a large surgical practice during the last ten years, in this city, and transcribe the following cases and their results from two records:

1*st Case.* Where cars passed over both inferior extremities—amputated right leg below the knee, and half of left foot—*recovered.*

2*nd Case.* Where driving wheels of locomotive passed over a mans foot—amputated at metatarsal joint—*recovered.*

3*d. Case.* Where train of cars passed over a mans arm while he lay intoxicated on the track, causing very extensive laceration and fracture; amputation and *recovery.*

Here are three cases out of four in one surgeons experience, where operations from the results of railroad injury were successful.

The other record of capital operations following such injuries, show a complete success in *two cases out of three.*

We do not wonder then, that this ostentatious aspirant for surgical fame, asks "*how long should the surgeon wait after the injury is received before he should proceed to operate.*

From the record of *his* experience, this is the most *practical* question he could have asked; for he has evidently been too anxious to *make capital* operations without due regard to the principles of conservative surgery. He asks the question, however, as if he supposes that a definite and absolute rule—applicable to all cases—can be given. The surgeon is to be guided and governed in such cases by *general principles.* Age, sex, condition of general health, together with the extent and severity of the injury, present the chief considerations which suggest to the mind of the operator, the judicious application of those principles.

The writer of that report ought to have asked whether he should ever operate in such cases, before *proper reaction* is established; and then consult his own experience for the desired, and much needed information.

If Railroad Companies are unfortunate in having accidents requiring Surgical treatment, it would seem from the report of Dr. B. that they are sometimes equally unfortunate in the selection of their surgeons.

R.

[Since writing the above, the "*Report of operations preceded by Railroad injuries,*" has made its appearance in the columes of the *Daily Tribune,* one of our city newspapers. If the author of the article solicited its republication in the columes of a daily paper, he ought to be elected as "one of the secretaries" of some advertising quack association. If, on the other hand, it was done without his knowledge or consent, then he deserves the pity of the whole profession.]

TRANSACTIONS OF THE FIFTH ANNUAL MEETING OF THE MICHIGAN STATE MEDICAL SOCIETY, HELD AT ANN ARBOR, MARCH 26TH, 1857.

The meeting was called to order at 10 o'clock, A, M., by the President, Dr. J. H. Beech. The roll was called by the Secretary, and the minutes of last meeting read and approved.

In consequence of the non-arrival of many expected members, the regular order of business was suspended, and the reading of the President's address deferred, until 2 o'clock, P. M.

The Society then proceeded to the election of new members, when the following gentlemen were proposed and elected : Dr. G. E. Corbin of Stockbridge; Dr. E. C. Dutton, of Eaton Rapids; Dr. Axford, of Detroit, and Dr. Tanner, of Ann Arbor.

On motion of Dr. Beech, Dr. Wm. Sprague, of Coldwater, was elected an honorary member, and on motion of Dr. Pitcher, Dr. G. B. Russel, of Detroit, was elected an honorary member.

It was moved and carried, that a committee be appointed by the President, to nominate officers for the ensuing year.

The President appointed the following committee:

Dr. Arnold, of Monroe; Dr. Stockwell, of Port Huron; Dr. Axford, of Detroit; Dr. Wheelan, of Hillsdale, and Dr. Collins, of Eaton Rapids.

Dr. Pitcher presented a paper from Dr. Morse Stuart, on the meterology of Detroit, and moved that the same be read by title, and referred to Com. on Publication. Carried.

Dr. Pitcher also presented a paper, a statistical examination of Diseases in his practice during the past year, which was, on motion, read by title and referred to Com. on Publication.

Dr. Stockwell remarked that he believed a change of time for holding the meetings, would result in bringing a larger attendance, and moved that a committee be appointed to enquire into, and report upon the matter.

Dr. Wheelan also spoke in favor of changing the time, and advocated holding the meeting in Detroit, instead of Ann Arbor.

Dr. Pitcher moved that the Committee be instructed to inquire and report in regard to the expediency of holding biennial sessions at Lansing, during the sessions of the State Legislature, and on alternate years, at such place as the Society shall determine. Carried.

The President appointed the following committee on this subject: Dr. A. B. Palmer, of Ann Arbor; Dr. Stebbins, of Detroit and Dr. Stockwell, of Port Huron.

The Society then proceeded to the election of delegates to the American Medical Association.

On motion, Drs. L. H. Cobb and Z. Pitcher of Detroit, were appointed to serve as delegates.

The Society adjourned to 2 o'clock, P. M.

AFTERNOON SESSION, 2 P. M.

Meeting called to order by the President. Minutes of Morning Session read and corrected.

On motion of Dr. Palmer, Dr. J. F. Weeds was elected a member.

The Society then listened to the excellent address of the President, on some of the Hygieine and Medico-political subjects, demanding the care and attention of the medical practitioner.

Dr. Palmer moved a vote of thanks to the President for his excellent address, and that he be requested to furnish a copy for publication in the Transactions of the Society, which was unanimously carried.

Reports of Committees being in order, the Committee on Nomination reported as follows:

For President, Dr. Stebbins, of Detroit; Vice President, Dr. Stockwell, of Port Huron; Secretary, Dr. E. P. Christian, of Detroit; Treasurer, S. A. Douglas, Ann Arbor.

Report accepted, and nominations confirmed by the Society.

The President elect, tendered his thanks to the Society, and begged the privilege of declining, but on motion of Dr. Pitcher, was conducted to the Chair by the Nominating Committee.

Dr. Palmer, Chairman of Committee on changing time and place of future meetings reported as follows:

Resolved, That the Constitution be so amended, that Biennial Meetings of this society shall be held at Lansing, during the Session of the Legislature, on the third Wednesday of January; and the alternate meetings, at such time and place as the Society, at its meetings not held at Lansing, by vote, from year to year, may direct.

Report accepted, and Resolution unanimously adopted.

Dr. Beech moved that the next annual meeting be held at Detroit, on the 3rd Wednesday of January, 1858. Carried.

On motion of Dr. Palmer, the following new members were elected: Dr S. J. Redfield, J. B. Ford, G. B. Willson and H. M. Lilly.

Dr. Beech presented a paper—a statistical analysis and registration of the diseases in his practice during the past year, with remarks, of which he gave an extract, and the paper was referred to Committee on Publication.

Dr. Christian gave a synopsis of his report, which was referred to same Committee.

The Society then proceeded to finish the number of Delegates to the American Medical Association, and the following gentlemen were appointed:

Dr. Pattison of Tecumseh, Stebbins of Detroit, Downer of Northville, Ewing of Dexter, Gorton of Detroit, Douglas of Ann Arbor, Davenport of Detroit and Landon of Monroe,

Dr. Palmer moved that the appointed have power to appoint substitutes, and also to fill up their number to ten, that being the number to which this Society is entitled. Carried.

On motion, the following Committee was appointed by the President, on Publication, viz: Drs. Palmer, Sager and Denton.

On motion of Dr. Christian, Dr. Stockwell of Port Huron, was appointed Chairman of a Committee to report at the next meeting on the diseases and topography of the North-East section of the State.

On motion of Dr. Stockwell, Dr. Sager was appointed Chairman of a Committee to report at next meeting on Puerperal Diseases.

On motion of Dr. Palmer, Dr. Dubois was appointed to report on Rheumatism.

Dr. E. G. Corbin was appointed to report on diseases and topography of Eaton and Livingston counties.

Dr. Thompson, also, on diseases and topography of his section.

Dr. Collins on diseases and topography of his section.

Dr. Davenport on diseases and topography of Wayne Co.

Dr. Axford to report on Vaccination.

Dr. W. W. Hyppolite was elected a member, and appointed to report on zimotic poisons of this State.

Dr. Palmer was appointed to report on diseases of children, and Dr. Denton to report on diseases of the aged.

Dr. Denton, in behalf of the Faculty of the College, extended an invitation to the Society, to an entertainment at the residence of professor Douglas, given in honor of the graduating class.

Moved by Dr. Beech that the invitation of the Faculty be accepted, and the thanks of the Society be returned.

On motion of Dr. ———, it was resolved that the transactions of this Meeting be published in the Peninsular Medical Journal, and the surplus funds be appropriated to that purpose.

On motion the Society adjourned.

E. P. Christian, *Secretary*

American Medical Association.

The tenth meeting of the Association will be held at Nashville on Tuesday, May 5th, 1857.

All bodies entitled to representation in the Association would very much further and facilitate its affairs by sending lists of their representatives at an early period, to the undersigned.

Article Second of the Constitution:

"The members of this institution shall collectively represent and have cog-

nizance of the medical profession in every part of the United States, and shall hold their appointment of membership either as delegates from local institutions, as members by invitation, or as permanent members.

"*The delegates* shall receive the appointment from permanently organized Medical Societies, Medical Colleges, Hospitals, Lunatic Asylums, and other permanently organized Medical Institutions of good standing in the United States. Each delegate shall hold his appointment for one year, and until another is appointed to succeed him, and shall participate in all the business and affairs of the association.

Each local society shall have the privelege of sending to the Association one delegate for every ten regular resident members, and one for every additional fraction of more than half this number.

The Faculty of every regularly constituted medical college or chartered school of medicine, shall have the prevelege of sending two delegates. The professional staff of every chartered or municipial hospital, containing a hundred inmates or more, shall have the privelege of sending one delegate.

"*The members of Invitation* shall consist of practitioners of reputable standing, from sections of the United States, not otherwise represented at the meeting. They shall receive their appointment by invitation of the meeting after an introduction by any of the members present, or from any of the absent permanent members. They shall hold their connection with the Association until the close of the annual session at which they are received, and shall be entitled to participate in all its affairs as in the case of delegates.

"*The perm anent members* shall consist of all those who have served in the capacity of delegates, and of such other members as may receive the appointment by unanimous votes.

"Permanents members shall at all times be entitled to attend the meetings and participate in the affairs of the Association, but without the right of voting; and when not in attendance, they shall be authorized to grant letters of introduction to reputable practitioners of medicine, residing in their vicinity, who may wish to participate in the business of the meetings, as provided for members by invitation.

"Every member elect prior to the permanent organization of the annual meeting, or before voting on any question after the meeting has been organined, must sign these regulations, inscribing his name and address in full, specifying in what capacity he attends, and if a delegate, the title of the institution from which he has received his appointment."

Resolutions passed at the Eighth meeting of the Association held at Philadelphia:

Resolved: That no state or local society shall hereafter be entitled to representation in this Association, that has not adopted its code of ethics.

Resolved: That no state or local society that has intentionally violated or disregarded any article or clause in the code of ethics, shall any longer be entitled to representation in this body.

Rdsolved: That no organization, or institution entitled to representation in this Asciation, shall be considered in good standing which has not adopted its code of ethics.

Resolutions passed at the Ninth meeting held at Detroit:

Resolved: That any new medical institution not heretofore represented in this body, be required to transmit to the secretary, with the credentials of its delegate, evidence of its existence, capacity, and good standing."

Medical papers throughout the Union are respectfully requested to copy the above resolutions at their earliest convenience.

ROBERT C. FOSTER,
Secretary A. M. Med. Ass. Nashville, Ten.

Obituary.—Died, in this city, on the 19th of March, Edmund G. Desnoyers, M. D., aged 34 years, 6 months and 16 days.

Dr. Desnoyers was a son of the Hon. Peter Desnoyers, of this City. He pursued his medical studies with Drs. Terry and Russel, and graduated with distinguished honors, at the Jefferson Medical College, Philadelphia, in 1844, and was probably the first native of this State who graduated at a regular medical school.

He was a gentleman of generous impulses; cordial in his social relations, and of accomplished talent. Not finding the practice of medicine congenial to his taste, he early devoted his attention to Chemistry and Pharmacy, in which department he enjoyed the well deserved reputation of being one of the most accomplished druggists. His untimely death is a severe affliction to a large circle of friends, and his loss to the profession calls from us this tribute to his memory. R.

Rush Medical College.

We find a few editorial remarks in the last number of the *Northwestern Medical and Surgical Journal*, which we desire to commend to the consideration of those who oppose the removal of the Medical Department of our University, from its *pleasant country seat*, to this city, where it may compete with *prosperous* medical schools, on the ground of clinical and hospital advantages. Especially do we commend the facts to those who are fearful of "disturbing the unity, harmony, and integrity," or "weakening the moral force of the system" of which our medical department forms a constituent.

The graduating class of the *Rush Medical College*, at the recent annual commencement, *numbered forty-one*; and after particularizing somewhat upon the exercises of the occasion—including a convivial entertainment provided by the Faculty—the editor says:

"Without boasting, we may claim that few medical classes in this or any other country, have enjoyed better advantages for attaining knowledge; than the one in attendance on Rush Medical College, during the past session. For, besides the ordinary college course, in which the *material* for dissection, and the means of illustration in the several departments, were ample, the class had *easy aceess to two hospitals*, well filled with patients. In one, regular clinics were given on *four mornings of each week*, and in the other *six mornings*; thereby enabling the class taking the hospital tickets, to be so divided as to allow the most direct and free examination of patients. So complete were these clinical arrangements, that scarcely a physical sign could be named, arising from acute and chronic diseases affecting the viscera of the chest, which was not carefnlly examined and listened to personally, during some part of the term by, the seventy-two members of the class, who attended the Mercy Hospital; while the opportunities for studying both *operative surgery* and surgical diseases, such as opthalmia, syphilis, ulcers, &c., *under Professor Brainard*, in the Marine, and *Professor Freer*, in the surgery wards of the Mercy Hospital, *were as ample as could be desired.*"

American Medical Education—Government Schools, &c.

It is very obvious that the majority of the defects for which the medical profession is responsible, whether found in the philosophy of our science or its ethical observances, is attributable to *defective medical education;* in other words, to the meagre attainments which have constituted the requisite qualifications for a passport into the ranks of our profession.

This fact has been admitted long enough, it would seem, to have accomplished, ere this, some radical changes, and the adoption of a uniform system, which would, in a great degree, control that mercenary competition which has offered diplomas—if not at wholesale prices—at least at a disgraceful discount. We find in the last number of the "*North American Medico Chirurgical Review*," a very able editorial upon this subject, from which, with great pleasure, we make some extracts, and, we doubt not, they will interest *all* of our readers, but more especially those who desire to see the medical department of our University prosperous, its standard elevated, and its advantages commensurate with its endowment. The italics are our own, and are intended for reference or application to the medical department of our University. The reader will find therein a practical support of the views and considerations which we have urged for the removal of the medical department to this city, where it may possess the elements of vitality and progress.

"Necessarily, all faults in American Medical Education are chargeable to two sources—1, Errors in the system itself, and 2, Derelictions of duty on the part of the colleges.

And, first of the system ; for although we have no law which governs our action under penalties for non-observance, we have a plan of instruction which is remarkably uniform throughout the country. In nine cases out of ten the student enters the office of a practitioner in the spring, reads for a year and a half, attends lectures for four or five months, reads again until fall, when he again listens to lectures until the last week in February, and then receives a diploma. His early education may or may not have been good ; his diligence during his time of study may or may not have been great; and every thing finally hinges on his examination for a degree. The power rests in the college exclusively; if its standard is high it matters but little about the preliminaries ; a good student becomes a good doctor of medicine; while, on the other hand, a low student of graduation must inevitably fill the ranks of the profession with inferior men.

It follows from the above, and from other facts equally well known, that the colleges are an autocracy, having in their hands the honor and true interests of the profession. It is no logical sequence from this, that the system is faulty. Such a power must rest somewhere, and the fewer repositories for such a responsibility, the more readily can they be controlled.

Looking at the broad result, we have no reason for supposing that this trust is not faithfully fulfilled. We mean that in other countries, where the colleges are hemmed in by other powers, *where the professorships are government offices, and the temptation to bid for large classes is removed, the evils of which it is the habit of American journalism to complain exists in spite of their more elaborate system.* European education, coupled with

Old World habits of thought and action, produces a limited number of splendid scholars; but it is our honest belief, that for keen, practical, useful, bed-side knowledge, no part of the world has a more competent medical profession than the United States. We speak from a somewhat extensive acquaintance, both in city and country. Lying back behind all systems and schemes of government is one great influence which must not be forgotten. It was the frequent remark of a shrewd gentleman of extensive knowledge of men, that "one must not expect all the Christian virtues for eight dollars a month." There is no power of public law, or public opinion, that can make a good physician, except it gives him a fair remuneration for his services.

Talent is in the market, and, if commerce will pay better than professional life, it will engage in commerce.

Without dwelling upon this idea, we wish merely to throw it out as suggestive of another. All projects to cheapen medical education are erroneous. We must, in considering this, disconnect our minds from European habits of thought, and look to the broad, vigorous American character as the basis of argument.

The government schools of Europe are founded on arristocratic institutions, and are a part of a social system which permeates all ranks, and governs all conditions in life. It would be a miracle if such a plan could be adapted to two races of people, living under such widely different influences. Even in monarchial countries, where the foundational idea of education is the same, we find wide variations in its development, which evidently depend on national character. *Thus, England has its medical departments in its Universities at Cambridge and Oxford, but their existence is hardly known. Rich in endowments, surrounded by the prestige of Isis and Cam, they are feeble nonentities in the strong medical life of England.* The schools of London competitive, expensive, *comparatively poor in funds, but rich in clinical advantages,* the energy of an immense City, and the talent drawn to them by the great reward which success in London implies, *have dwarfed* and overshadowed all other means of education. * * * *

We have said enough to indicate our belief, that *the European system is not to be desired on this side of the Atlantic.* We want an American system, one adapted to the national spirit, which would refuse even the priceless blessing of education when offered as a charity. Indeed, this is a proper and manly pride in a country so rich as ours, where the young man who fails can only accuse his own lack of energy or forethought. What modifications of our present scheme of education are desirable?

Shall we link in our State governments in their control, by establishing a supervisory board, having power to annul the diploma granted by the College? Such an idea has been broached, but it is only necessary to call to mind the changeful, and too frequently venal source of appointment of such a board, to see that instead of a conservative, it would be a radical movement, calculated to encourage the evil it was meant to avoid. Or shall we deprive the colleges of the power to grant diplomas, giving their function to a State Board of Regents?

One has only to think of the small political doctors who would be sure to receive the appointment of Regent, to be convinced that the profession, while it is too democratic for European methods, is too conservative for modern American politics.

So long as our political life is what it now is, and so long as public opinion is stronger and less easily evaded than any other force which can be brought to bear, we must trust to our present plan, or to some simple modification of it. The profession itself, speaking in its conventions, its societies, and through its press, is the only authority which can, or ought to govern the colleges. There may be—doubtless are facts, and grave ones, in the manner of granting diplomas to candidates for the doctorship; but we do not believe that these are inseparable from the system, or to be mended by any whole-

sale tinkering of so-called reforms. The very feature of which loudest complaint is made—competition—is its best safeguard. We are sick of their cry of "competition!" as if all heresy and schism were embodied in it. It is a grand, noble feature in our schools; and we hope never to see the day, when they shall be deprived of its healthy, life-giving stimulus.

We are too "intensely respectable." *A school cannot flourish without advertising; and the common sense plan is to let the advertisements show forth the advantages claimed by the school. It is through these advertisements that competition manifests itself, and attains to its natural results—a perpetuation of itself, and a tendency to drive schools to add to their talent and increase their advantages.* We do not assert that the use of competitive means may not be liable to great abuses; but eye hath not yet seen perfection, and we must look to consequences, before we attempt to remedy even an acknowledged evil. It is evident that, without competition, we should have fewer schools with greater powers, that, *instead of struggling to employ a higher order of talent to fill their museums, and surround themselves with abundant means of clinical instruction, we should have schools of doctrine, instead of instruction, and nests of nepotism instead of hives of labor.*

Even the control of a secular board of trustees is only desirable in the same light that a veto power is necessary in the freest government. The most intelligent board is quite as likely to fill a chair badly, as well; while the faculty can have only one motive in choosing a colleague—the interests of the school itself. The faculty should always possess the presidential power of nomination, leaving to the senatorial trustees the function of confirmation or rejection.

But, the reader will ask, what limit should be placed upon the privileges of the colleges. We may answer that *the most important interest of the profession at large, is in securing ample means of instruction for young men entering on* the field of practice. In our opinion, looking at the character and wants of the American people, our present system does not need radical alteration; and at the present moment, the colleges should simply be made to feel the pressure of professional approval or disapprobation, as either may seem best. Let the State Societies watch the schools, and assert their prerogative of censure if they are unworthy. There is not a school in the country so strong as to outlive the deserved and formal disapprobation of the American Medical Association. * * * * * *

It would seem that that school in a great city which should announce a collegiate year, with terms and vacations of appropriate length, offering a talent fully equal to that now concentrated in the winter term, with equal clinical advantages, would at once assume a leading position. There are in the country many students of sufficient means to avail themselves of such an opportunity, and they might be concentrated. We can forsee many difficulties in this scheme, but we do not look upon them as insuperable; and let the thing be once successful at a single point, competition and professional opinion would drive every school having any claim to respectability, into a similar arrangement.

Here is a practicable, tangible plan of reformation. *Let us try and perfect our present means of education before rushing blindly into the adoption of foreign and incongruous systems.*

Stramonium in Puerperal Convulsions.

R. H. Salter, M. D., in a communication read before the Boston Society for Medical improvement, and published in the last number of the *Boston Medical and Surgical Journal*, has reported six cases of puerperal convulsions, in which he found the *Tincture of Stramonium* a prompt and ef-

fectual remedy. In speaking of the ordinary practice of venesection in those cases, he says:

"In reference, however, to the practice of bleedings, &c., it is not enough to say that the patient has recovered. We want to know the form of convulsion in which it was practiced, and the effect of such treatment upon the future health of the individual. I cannot believe, even if the patient does survive the remedial process, that such enormous bleedings—so large in some instances, that there is not *pabulum vitæ* enough remaining to feed a convulsion—can be practiced without imminent peril to life, or in some way impairing the constitution, and laying the foundation for future disease and suffering,

There are cases, undoubtedly, in which all the symptoms taken together, would not only justify, but require, that a moderate bleeding should be premised as a *prepatory* measure: as, for example, where we find during the interval of the fits, by the state of the pulse, the evidence of phlogistic action in the circulating system. Ergot and turpentine, also, will be found very necessary adjuvants for fulfilling certain indications, and other articles might be mentioned. But in no case are these remedies *per se* for convulsions. I consider the tincture of Stramonium, properly administered, when these are not contra-indicating circumstances, as a *sine qua non*, for the speediest, safest and most uniformly successful for the relief of puerperal convulsions."

The *dose* which he administered, was a half ounce of the Tincture, repeated according to its effect in controlling the spasms. He also reports *two cases* of the simple forms of convulsion, in which he found the same remedy equally effectual.

Sickness and Death of Dr. Kane.

The death of the late Dr E. K. Kane, which took place in Havana on the 16th of February, though not unexpected has still filled the minds of all who knew him with deep regret that a career so brilliantly commenced and so faithfully followed should be so prematurely terminated. It was the fortune of the writer to attend him, in consultation with his regular physician (Dr. La Riverend), during the last part of the sickness which terminated his life. A few particulars of his case, gathered in that short period, will, it is believed, derive some interest from their connection with one so justly celebrated.

Dr. Kane inherited a decided predisposition to rheumatic affection, and had from early life been subject to attacks of articular rheumatism. He suffered very severely from this disease after his return from the first Arctic expedition. The heart, also, had become involved, and he was thought to have a considerable degree of hypertrophy, together with thickening of the valves. So severely was he afflicted with articular rheumatism while preparing for the last cruise in search of Sir John Franklin, that it was often necessary to apply friction to the joints for an hour, before rising in the morning, in order to enable him to ride to the Navy Yard, where the "Advance" was fitting out.

Very soon after getting into the high lattitudes, however, these difficul

ties subsided—a result which would hardly have been anticipated, but which he had observed in his own case on his previous voyage. What his sufferings and exposures were during his Arctic expedition, is well known; but it is proper to state that they were much more severe, and their effect upon his constitution more disastrous, than would be supposed from the few allusions made to his own case in the published account of the expedition.

On his return, his previous rheumatic and cardiac troubles had become complicated with scurvy; though very much exhausted and worn out by the hardships he had undergone, he allowed himself no time for repose, but labored incessantly in preparing the account of his expedition for publication. This fatigue, together with the great change in climate and habits brought on a severe relapse of his constitutional disease, aggravated by the newly acquired scorbutic taint. He received little or no benefit from the treatment of his disease while in this country, and was advised to try a change of climate; accordingly, after the publication of his book, he sailed for England. Here his health became much better, all his symptoms were much improved, and he considered himself nearly restored to health. As, however, there still remained some traces of scurvy about him his physicians advised him to spend the winter in the West Indies, for the benefit of the climate and fruits

Since his return from the north, there was a somewhat remarkable change in his ability to bear the motion of the ship; he had become unusually sensitive to sea-sickness, which was brought on by even a slight rolling of the vessel. The voyage from London to St. Thomas was, however, well supported; while there, his health continued to improve, and at the end of six weeks he sailed for Havana. The ship in which he took passage was overtaken by a severe storm; he was very much affected by the motion of the vessel, and in the effort and strain of vomiting ruptured a bloodvessel in the brain. Entire insensibility followed, and continued for several days after his arrival in Havana. A partial recovery took place after a few days, but the right side was found to be completely paralyzed.

During the months of December and January and until the 10th of February, he slowly rallied from this attack, and was able to walk a little about his room and to drive out. He recovered the use of the right hand and wrist to a great degree, and shortly before the second attack was able to rotate the fore-arm. His mind was perfectly clear, although there was some loss of control over the memory. When he endeavored to recall any circumstance which had transpired, several others, more or less connected with it, were remembered, from which he was unable to isolate the particular fact desired. Of this difficulty he was himself perfectly conscious.

On the 10th of February, at the morning visit, he appeared more cheerful than usual, and conversed a good deal with those about him. About

11 o'clock, however, he was suddenly seized with a severe attack of appoplexy, which deprived him entirely of consciousness. There was at first considerable spasmodic contraction of the muscles, which simulated in some degree a fit of epilepsy. These symptoms soon subsided, leaving him with almost complete paralysis of the entire body. The iris responded to light, and the muscles of the pharynx acted when stimulated by fluid introduced into the mouth. The pulse was feeble, and varied from 120 to 140 beats. The skin was moist and cool. He remained very much in this state until his death, which took place on the fifth day after the seizure. In this interval, however, he seemed to have recovered some degree of consciousness, and several times signified assent to a question by turning his eyes toward the speaker. There was some motion of the lips when a spoon was placed in the mouth, and once or twice he was able to make sensible pressure with the right hand. There was no indication of suffering during his last hours, and he died apparently from simple exhaustion.

The tenacity of life in this case was quite remarkable, A constitution broken by chronic disease of many years' standing—a series of hardships and exposures almost unheard of, with all the depressing addition of care and responsibility—followed by an affection which for some months threatened his life; add to all these an attack of appoplexy, paralyzing entirely the right side, and in two months after a relapse affecting his whole body, and one can hardly conceive how life could have been sustained for so long a period as five days after the last shock.

The treatment in this case was quite simple. On account of his previous illness and the scorbutic taint in his system, it was thought unsafe to resort to the active measures usually pursued in such cases. After the first attack, small doses of ext. nux vomica with quinine were administered. These were suspended after a time, through fear of increasing the cardiac disease, and a high tonic and anti-scorbutic course was followed. After the second attack, a few leeches were applied, together with cold applications to the head.—*Boston Med. & Surg. Journal.* F. S. A.

REPORT of the Committee on State Affairs in favor of a law for the Registration of Marriages, Births and Deaths, in the State of Michigan.

The Committee on State Affairs, to whom was referred the various petitions which have been presented, praying for the passage of an act requiring a Registry of marriages, births and deaths within this State, have had that subject under consideration, and beg leave to submit the following report:

A law for the registration of Marriages has now a place upon our Statute book. But so imperfect is this law in some of its features, that it has been almost wholy neglected or disregarded, by those entrusted with the duty of carrying out its provisions, though subject to a heavy penalty for such neglect.

So little attention has been paid to it that the records in the Clerk's office for the county of Wayne—the most populous county in the State—show, as we are informed, that only 419 marriages were recorded in that office for the year 1856.

In some cases the distance of the parties from the county seat may account for a neglect to comply with the law; in others, disinclination on the part of the clergymen solemnizing the marriage, to demand the legal fee required to be paid for recording the marriage, under the registration act. But whatever the causes, they are alike injurious in their results. There should be required a better reason than either of these, or any other which is believed to exist, for disregarding a law so eminently calculated to guard the interests of community by rendering perpetual the evidence of the marriage and family relation. It is to be presumed that similar neglect prevails in other portions of the State. It is to remedy the defects of the law so as hereafter to compel a more general compliance with it, and to couple with it a provision also requiring a careful and faithful registry of all the births and marriages in the State, that the action of the Legislature it now required.

The beneficial result of a uniform and general system of registration of marriages, births and deaths has been fully realized by many years of experience in several States of the Union. The law has been as strictly and uniformly enforced in such States as any other statute. Wherever it has been longest in operation and most generally enforced, there its advantages are most obvious, and its requirements most popular.

A very natural and laudable desire exists even amongst the citizens of our republican country, to know something of their ancestry, and not alone from a feeling of mere curiosity, but often as a matter affecting their material and pecuniary, as well as their moral interests and affections. Questions, too, in this ever-changing age, are constantly arising in communities and families, as to the age of individuals, upon the relation of which, may depend many important interests and rights, political, social and pecuniary, all of which can be easily solved through the information to be procured from an efficient registry. Township officers would also be materially assisted in determining vexatious questions as to the settlement and support of paupers, and would be better enabled to avoid expensive litigation growing out of that subject. The equitable descent and distribution of the estates of intestates would be more cetainly secured, and the prompt and more certain identification of individuals, when, from similarity of names or other causes, it would otherwise be difficult, would be another important benefit. The progress of population for purposes of political economy, developing the operations of certain fixed laws relative to the subject, could be ascertained and defined at stated periods by the proposed measure.

Considerations equally cogent, would seem to reqnire a similar registration of births and deaths. Statistics of mortality, showing the extent and causes of deaths in different localities, have been demonstrsted by the experience of those states and countries, where such a law exists, as of the first importance in many respects. In determining whether death, in certain cases, results from natural causes or otherwise, whether by disease or violence, murder or accident, it has been frequently found of the greatest moment in the trial of important causes in the courts.

For ascertaining the relative number of deaths occuring in the various sections of this State, and their causes, and by comparing the numbers in certain given localities, eliciting inquiry as to any disparity that may exist, whether it is caused by stagnant water, or a violation of any of the other laws of health, thus suggesting the remedy to be applied for removing disease, an act for the registration of deaths would be found of great value. Much information would also be elicited as to the influence of occupation upon health, in regard to hereditary taint, such as consumption, scroufula, &c., and would show the urgent necessity of endeavoring to remove such cause when within the reach of medical science; and it would do much, too, to awaken the pub-

lic to the necessity of preventing the introduction of pestilential diseases, a premonition of which may be afforded by the record of increased deaths from maladies usually accompanying fatal epidemics. Of the facilities it would afford for the collection of information as to the usual and physical causes of mortality with a view to the use of the necessary means for their eradication or amelioration, we need not speak. This consideration of the subject will suggest itself to the mind of every intelligent man.

Statistics of registration in various European, as well as in those States in which the experiment has been tested, show that both in different localities, and different occupations, the difference has been very great in the destruction of human life. They have thus been led to adopt measures of equalization, so far as the improvement of the sanitary condition of the country can produce that result; and already with the happiest effect by the prolongation of life in a very perceptible degree. A similar system in this State can be made to answer a similar useful purpose, and with an amount of labor and expense quite insignificant, compared with the benefits which would be derived by our citizens in the general improvement of their health and property.

One of the most eminent philanthropists of the age, has said that numerous and momentuous as are the questions which present themselves for solution at the present day, and urgently as many of them demand our consideration, not one of them can fairly be brought into competition with the great question of sanitary reform. Look at it simply as a question of humanity, and it will not suffer by a comparison with the highest efforts of the philanthropist; regard it as a great act of justice, and it must be acknowledged that here, too, it presents peculiar claims to consideration. Measure it by the rule of man's economy, and it will be found without a rival. View it in its moral relations and re-actions, and we know not if the great question of education will not sink before it. An eminent English statesman has also declared it to be a subject of infinite importance to the security of property—important to ascertain the sanitary state and condition of individuals and communities under various circumstances—important to enable the country to acquire a general knowledge of the state of population.

There are many almost equally weighty reasons that might be urged in favor of a registration of births as well as marriages and deaths. Not the least of these is the facility it would afford in collecting statistics of population, in ascertaining the relative number of births to deaths, and of males and females. To the political economist, these are inquiries of much interest, as they are of great importance to society, not, it is true, in a pecuniary point of view, but as contributing largely to the fund of human knowledge, upon a question that closely concerns its interests in other respects. But this discussion of the subject is so intimately interwoven with the other two, and forms so necessary a part of a system, that we will not dwell further upon its advantages.

The publication of the statistics, which would be collected by a well matured and rigidly enforced registry law, would serve as an annual lesson on the laws of human life in their operation upon ourselves, a kind of practical physiology, taught in all our towns, and at every fireside, far more instructive and impressive than any derived from books, teaching the principles and laws of life developed by our natural constituion, as actually existing under surrounding influences, and pointing to the means for their improvement and modification.

Your committee therefore submit herewith a bill, embodying and intended to carry out these views, and recommend that it be enacted into a law.

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ORIGINAL COMMUNICATIONS.

Article I.—ON THE LINKS CONNECTING THE VEGETABLE AND ANIMAL KINGDOMS.—Concluded.

BY HENRY GOADBY, M. D., F. L. S.

Many of the plants belonging to the family *Siphonaceæ* attain a considerable size, and resemble the higher sea-weeds in their mode of growth. They are inhabitants no less of the fresh waters, than of the Ocean, and consist of large tubular cells, which usually extend themselves into branches by which they form arborescent fronds. The entire frond consists of a simple continuous tube, the contents of which may be readily pressed out by making an incision in the wall of the tube. But a better example is met with in *Vaucheria*, the majority of its species being inhabitants of the fresh waters; in these plants the formation of gonidiœ (zoospores) may readily be seen. the entire process only occupying a short time. The extremity of one of the filaments usually swells up in the form of a club, the endochrome accumulates in it, a separation takes place, a new envelope is formed around the mass cut off by division, and subsequently the membranous wall of the investing tube gives way, and the zoospores escape, and swim off by their vibratile organs.

Branching filaments are often seen to bear at their sides globular or oval capsules, which are filled with dark endochrome; these have been seen to give exit to large bodies covered with a firm envelope, from which new plants arise.

In the neighborhood of these "capsules" other projections are usually found, which from their curved figure have been called "horns," and these have been supposed to fulfill the function of the anthers of flowering plants. Recent observations have demonstrated that these "horns" are *antheridia*, which produce antherozoids in their interior; the capsules are *germ cells*, the aggregated mass of endochrome becoming, when fertilized, the primordial cell of a new generation.

The antherozoids when set free from the antheridium, swarm over the exterior of the capsule, and have been seen to penetrate its cavity, through an aperture which forms in its wall, and to come into contact with the surface of the endochrome, over which they diffuse themselves; there they seem to undergo dissolution, their contents mingling themselves with those of the germ-cell; and the endochrome mass, which had no proper investment of its own, soon begins to form an envelope, which increases in thicknes and strength, until it has acquired such a density as enables it to form a firm protection to its contents.

The generative apparatus of the *Characeæ* consists of two sets of bodies, both of which grow at the bases of the branches; one set is called the "globules,,, and the other the "nucules." The globules are really antheridia; the nucules contain the germ-cells. The globules are nearly spherical, have an envelope composed of eight triangular valves, which enclose a nucleus of a light reddish color; this nucleus is chiefly composed of a mass of filaments rolled up compactly together; and each of these filaments consists of a linear succession of cells. In each of these cells there is formed a *spiral thread* of two or three coils, which, at first motionless, after a time begins to move and revolve within the cell; at last the cell wall gives way, and the spiral thread makes its way out, partially straightens itself, and moves actively through the water for some time, by the action of two long, and very delicate filaments: these are the antherozoids. The linear series of cells, containing anthe-

ridia, are shown at A. fig. 142; and the antherozoids with their filamentous appendages at B.

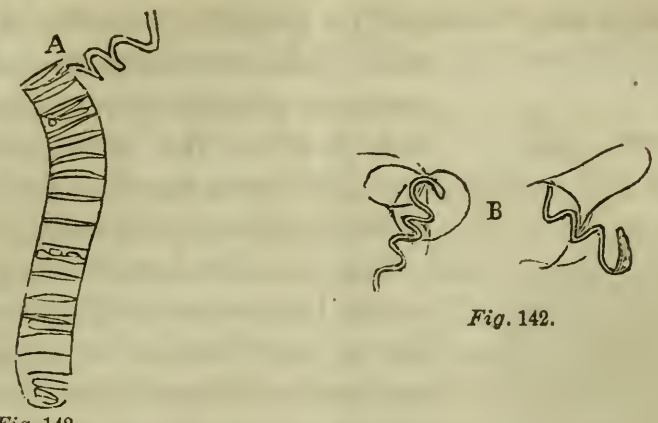

Fig. 142.

Fig. 142.

In the example given, we have seen the antherozoids, freely liberated from the case or cell in which they were produced, and herein consists a wonderful analogy between the production of antherozoids in the vegetable, and spermatozoa in the animal kingdom. To render this analogy still more perfect, we shall adduce examples in which the antherozoids are discharged from the plant, in their antheridial cases, or cells. The generative filaments of *Fucus platycarpus* are found to discharge only antheridial cells, the antherozoids being in every stage of development, as shown in fig. 143. As they mature, they burst their cell-wall, and move off with great activity.

Fig. 143.

Notwithstanding the extreme interest of this part of our subject, we shall only offer one other illustration of it, but we believe this, to be too important to justify omission.

The *mildew*, which appears upon the straw of wheat, shows itself externally in the form of circular clusters of pear-shaped spore-cases, each containing two compartments filled with sporules; these arise from a filamentous tissue constituting the

mycelium, the threads of which interweave themselves with the tissue of the straw; and they make their way to the surface through the "stomata" (or breathing mouths) of its epidermis. This constitutes the plant called *puccinia graminis*, represented in fig. 144, in which the arrangement of the plant is shown, together with examples of the liberated spore-cells.

Fig. 144.

The *rust*, which makes its appearance on the leaves and chaff-scales of wheat, has a fructification that appears to be essentially different from that just described, consisting of oval spore-cases that grow without any regularity of arrangement from the threads of the mycelium; and hence it has been supposed to form a distinct plant, called *Uredo rubigo*. Recent observations, however, render it certain that "rust" is only an early form of "mildew;" the one form being capable of development into the other, and the fructification characteristic of the two supposed genera having been evolved on one and the same individual. Another presumed species, *Uredo segetum*, when it attacks the flower of the wheat, reduces the ears to black masses of sooty powder, known as "smut," or "dust-brand." The "bunt" or "stinking rust" is another species of *Uredo* (*U. fœtida*), which is chiefly distinguished by its disgusting odor. It may be considered certain that the admixture of the spores of any of these fungi with the grains, will endanger the plant raised from them; but it is equally certain that the fungi have little tendency to develope themselves in plants that are vegetating with perfect healthiness. It has been ascertained, however, that there are *very few* wheat-grains near the points of which one or two sporules of fungi may not be found, entangled among their minute hairs; and it is fair to suppose that these sporules remain dormant, *unless the plant take on an unhealthy condition*.

Such is a brief history of the remarkable processes belonging to the fecundation of plants, as furnished by the best authorities; whose labors we have gladly availed ourself of to such an extent as the circumstances connected with our special wants rendered necessary.

It is necessary, now to show, how far these facts can be applied to the *animal* kingdom. It has already been indicated that considerable identity consists between the *vegetable antherozoids*, and the *spermatozoa* of *animals*—it is proposed, now, to investigate the latter subject.

The seminiferous tubuli of animals, contain an immense number of *cells;* the contents of these in young, and immature animals consist of *fine granular* substance, but as age increases these *granules* change into a multitude of *unclei.* Increased age, produces a great change in these *cells;* they consist (at the age of puberty) of an extremely small quantity of a *viscid fluid*, and innumerable minute, linear corpuscles having a peculiar, vibratile or oscillatory movement. These constitute the *spermatozoa*, *spermatic animalcules*, or *spermatic filaments;* they are soft, homogeneous corpuscles, having a thicker portion or *a head*, and a filamentous portion or *tail?* These corpuscles are originally formed *within the cell*, like the antherozoids of plants, and when mature, they are liberated in both kingdoms, by the rupture of the *cell-wall.* In animals, the disclosure of the filamentous corpuscles, occurs in varying portion of the generative organs—in man, however, it appears to take place in the epididymus.

In examining microscopically the contents of a seminiferous tubule, the addition of water will dissolve the cell-walls, and liberate the enclosed corpuscles. The illustration of human spermatozoa is given in fig. 145,

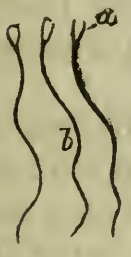

Fig. 145.

It seems desirable at this point, to offer a resume of what has gone before, in the past record of this subject: firstly, the identity of *simple membrane*, in *both kingdoms*, was established.

Then the *nucleated* character of cells in the two kingdoms was discussed.

The uniformity of the production of *Vibratile cilia*, followed.

Starch and cellulose was demonstrated as common to both.

Fat cells were proved to exist, no less in plants, than animals.

Mineral matter (carbonate of lime) was found equally distributed.

Silica, even, whilst a constituent of plants, was yet found in animals.

Stomata, or breathing mouths in plants, identical with a kindred structure in animals.

Cuticle in both kingdoms, identical.

Pigment cells, were next examined in both kingdoms.

Spiral vessels of plants, and breathing organs of insects proved to be identical.

The character of the *circulation* of a fluid in plants, was next compared with the circulation of the blood in animals.

Conjugation in plants was assumed to typify sexual congress in animals, and lastly,

Perfect identity established between the antherozoids in plants, and the spermatic corpuscles of animals.

The attempt has been made to show the remarkable identity in the structure of certain tissues, common alike to the *vegetable* and *animal* kingdoms; so far as *the revelations of the Microscope extends*, but here, the *identity ceases*—no *real alliance* exists between *plants* and *animals*. That plants were formed long antecedent to the production of animals, is universally admitted, and it would appear that the *principles* involved in their production were so perfect, in the sight of Supreme Wisdom, that the like structures—sometimes slightly modified to meet a special want, sometimes existing in their full integrity—may well be applied as the basis of animal tissues. Yet a *broad line of demarkation* inevitably separates the plant, from the animal; *microscopically* alike, there is yet a *chemical* difference existing between them.

The *fertilized germ* of a plant, and the impregnated ovum of an animal, are (*microscopically*) identical; throughout the first series of changes through which both are destined to pass, the like thorough identity obtains, still no human skill, or ingenuity could possibly elevate the germ of a plant to the production of an animal, nor degrade the latter, to the condition of the former.

Just as impossible would it be to compel the seed of a plant of one species to produce some higher or lower form of vegetable existence, as to educate the germ of one animal to the production of any other.

The seed of a plant, or the ovum of an animal is a something purely *sui generis;* it contains within itself certain *elements* and *definite characteristics* which even the microscope is powerless to discover.

But this theme must give place to another; we beg to assure our readers that the subject is not by any means exhausted; other parallelisms no less remarkable, yet remain—but a variety of circumstances combine, to render it desirable to close this series of articles, which have already extended beyond the usual limits of journalism. This, therefore, will be all we have to say at present, ON THE LINKS CONNECTING THE VEGETABLE AND ANIMAL KINGDOMS.

ARTICLE II.—ABSTRACT OF AN INTRODUCTORY LECTURE, DELIVERED BEFORE THE MEDICAL CLASS OF UNIVERSITY MEDICAL COLLEGE, AT BURLINGTON, VERMONT, IN MARCH, 1857.

GENTLEMEN:—The importance of principles, of fundamental propositions or doctrines, which, properly associated and combined, or considered individually, may serve as guides in research—as a basis on which to construct a system, or to found practice, will not be questioned. Nor will it be doubted that the same postulate is pertinent, and, therefore, applicable to all the multiplied subjects of human thought and practical investigation, or indispensable to success in all the innumerous avenues of human ingenuity and pursuit. But if there be any department, to the successful cultivation of which principles are indispensable in an extraordinary sense, and to the practical purposes of which they should be made inservient, as substantial foundations of deduction, it is emphatically that department which relates to, and deals with, the organic laws, the constitutions and health, and, therefore, the happiness of our fellow beings. It is the department which you have chosen as the field of your enterprise and skill—as the source whence you are to derive fame, that is ennobling, and, by consequence, desirable, or infamy, that is degrading, crushing, ruinous—and to cultivate which, and to qualify yourselves for the intelligent performance of the responsible duties of your future lives, you are associated here, and are to be associated as friends and co-laborers, throughout the session that is before us. As appropriate subjects for an introductory lecture to a *course* on the *principles* and *practice of medicine*, I propose to occupy your attention during the hour allotted to me this morning, with a few considerations on *diathesis*—the scope of

its meaning, the importance, nay, the duty of considering it with care in every case of disease which may present to us for investigation and treatment, and the influence operated on our therapia, and on our success in the contest with disease, by the views we adopt in reference to it. And first of diathesis. Literally, and briefly, it means "to place," or, "I dispose,"—disposition, tendency. Technically, it signifies a particular condition of the economy, which engenders a marked proclivity to certain forms of disease, rather than to certain others. But these definitions we regard as quite too restricted, and we propose to extend its significance. Considered more fully, then, it embraces constitution—abiding or controlling affection of the body. Applied to an individual, it involves the consideration of some tendency of the constitution to respond in a particular manner to the influence of certain agents, as in those examples, in which ipecăcuanha uniformly induces tiltilation of the nasal passages, followed by sneezing, sense of suffocation, and more or less protracted cough—in which a paroxysm of asthma is uniformly produced by the inhalation of certain effluvia or gasses, generally innocuous—or by lodging in a particular apartment or locality; in which opium, instead of begetting quiet repose, gives rise to restlessness and vigilance—or, instead of quieting gastric irritation, without exception, induces nausea and vomiting or cerebral disturbance, amounting to temporary mental aberation. Numerous other examples might be referred to, in illustration; but these will suffice to render obvious the fact we desire to impress. Thus considered, it is quite nearly allied to idiosyncracy. In this condition of the economy it will be found, we believe, that the same cause or event is uniformly followed by the same unvarying result; and, with slight modifications, as regards intensity, irrespective of other causes and conditions.

Here, too, the constitutional peculiarity, proclivity, or tendency, generally continues through life, although in certain, perhaps less essential examples, exceptions to this proposition will be observed. Many may present themselves to the recollection, of the existence of predominent proclivities in early life, which subside entirely, or are commuted or exchanged, in the progress of growth and developement, and as life progresses. We have known many young persons who were always made sick by indulgence in the use of cheese, even in

small quantity, by milk, by honey, &c., and yet, in after life, have been able to make use of each, not only with impunity, but with satisfaction. So, too, we have known persons in whom an instinctive aversion to butter predominated, and who could not taste it without being made oppressively sick; and you will have occasion to observe, in the course of your experience, that certain individuals cannot partake of particular varieties of fish, without the production of urticaria; so, also, strawberries, raspberries, &c. A fact, quite analogous, will be found to obtain, as regards actual disease, certain forms of which, in the first periods of life, being constantly present, as rachitis, or recurring from time to time, giving rise to much suffering, and, in subsequent years, subsiding entirely. Examples of this last will be noticed in the marked disposition to cerebral irritation, in childhood, and to cutaneous affections. Considered in reference to the species, or to people in certain districts, or those of particular countries, diathesis manifests itself by inducing a particular condition of vitality, and therefore of the nervous system, or of the circulating fluids, the blood more particularly, which, when appropriate exciting causes are brought to act upon the vital susceptibilities, impresses a certain, definite *type* or order of succession of the several phenomena of disease, or a marked grade of action, represented by the different degrees of strength or weakness, which characterize the vital actions of individual functions, or of the aggregate movements of the economy, not only when laboring under disease, but during health, and that, too, whatever the organ or tissue implicated, the cause or causes, or the general hygienic conditions. Hence it is that, if any variety of disease, as erysipelas, or influenza, occur as an epidemic, it will present its several phenomena in a certain relation, one to another, and successively, in obedience to laws which, within certain limits, are definite and uniform, or it will assume an obvious and predominant grade. Hence the terms, sthenic, as expressive of excess of tone or strength, and asthenic, as indicative of weakness or diminished tone, and consequently a character of synocha, cauma, or entony, or of asthenia, typhus or adynamia will be present. There may, however, be a diathesis of an intermediate kind, in which neither the sthenic nor asthenic characteristic is sufficiently affirmatively declared to impress upon existing disease, a grade either of strength or weakness, but

a grade differing essentially from each. Such, doubtless, was that which characterized the synochus of Cullen's Nosology, in contradistinction from synocha on the one hand, and the two forms of typhus, which he recognized—typhus gravior and mitior. To this predominant tendency or disposition is it attributable that an epidemic of the same disease, i. e., characterized by the same pathological condition of parts, and involving the same organs and tissues, though occurring at different and remote periods, will exhibit remarkably different characters, as regards vitality, and therefore of type or grade, or both, and require treatment differing in kind or degree, no less remarkably.

Herein, it is believed, too, is the true explanation of the differences in reasoning, in regard both to the real condition of vital action, and, therefore, the real nature, the indications and the treatment of acute rheumatism by Fordyce, Haygarth and others. Thus it is, too, that in our own times, it is found that recurring epidemics of scarlatina, rubiola, and at times variola, erysipelas, &c., demand a more or less actively depletory and contrastimulant mode of treatment, while on other occasions a decidedly restorative system is imperative. The same is true of pneumonia; nor is it less so of many other forms of disease, and especially of most, if not all the palludal fevers—the varieties of intermittent, remittent and yellow fevers.

But this determining disposition or habit of body does not manifest itself alone during epidemics, nor is it applicable to all cases of any given epidemic. Even when any form of disease occurs, sporadically, it will be found that, in one individual, one grade will predominate, in another, a different, indicating a difference in the two individuals, as regards tone or strength, or, in the language of another, "the actual quantum of vitality," and giving rise to a necessity for close and rigorous study of each particular example and most obvious differences in treatment. So, likewise, during the prevalence of a given epidemic, while, perhaps, the majority of cases may be characterized by a grade notably sthenic, or the contrary, a greater or less number will be found to be exceptions to the predominant character, and, therefore, to require a kind of treatment of an opposite description, or an intermediate grade may exist in a proportion of the cases, giving rise to a necessity for a system of practice neither strictly depletory nor exclusively

stimulent. But again, it is not less true that it is incumbent upon the practitioner, during the prevalence of an epidemic form of disease, if other forms offer for investigation and treatment, to consider well the influence of the *general cause*, in impressing upon all existing varieties the peculiar character of *grade*, and it may be, of type, too, that belongs to it, especially. Thus, if typhus fever prevail, or erysipelas, or cholera, it will be observed that, if other varieties of disease occur, they may, or will be likely to put on the grade, and to some extent, the livery, of the existing epidemic. But this prevalent disposition, habit, or proclivity, is often associated with certain histological peculiarities or conditions of parts, as an excess or deficiency of fibrine in the blood, or some physiological predominance of function, as that of the nervous system, the biliary, the circulating, etc., or some marked depravity of one or more of the fundamental operations of the economy, as the nutritive, the assimilative, &c., and, therefore, induces a proclivity to the developement of some particular form of disease. Hence the phraseology—the rheumatic, the scrofulous, the tuberculous, the cancerous and the calculous diatheses, and the significant truths which they convey. These, respectively, or some of them at least, it is believed, have been satisfactorily shown, by modern researches, to be dependent upon conditions, either in anatomical structure or physiological endowments, that are inherent in the constitutions of persons characterized by one or another of the diatheses mentioned, and, by consequence, not to any consideral extent amenable to the ordinary cause of diseases. Other diatheses are recognized by medical observers as among the prevalent tendencies, in different classes of individuals, to particular forms of disease, as the gouty, the scorbutic, hæmorahgic, &c. Circumstances, often transient in duration, may, and frequently do, induce a condition of the economy, which amounts to a controlling tendency to particular forms of disease. They not only give rise to such special disposition to a particular variety of diseased action, and of type, also, but they may impress a certain *grade*, which, intelligently considered by the practitioner, cannot fail to guide him to an appropriate course of practice. These may be general in their influence, i. e., they may involve the constitutional susceptibilities of the people of an entire country, or of many countries successively, or they may be local, and

therefore, confined to a district of limited extent. In this connection, reference has already been made to epidemics of various kinds, as cholera, influenza, pneumonia typhoids, erysipelas, etc. So, too, local influences induce a like disposition in the constitutions of the residents of certain sections of country, to the developement of various forms of diseased action. Such are the biliary derangements, the intermittent and remittent fevers of intertropical regions; the intermittents and even remittents of higher latitudes, but of marshy districts, and the cretinism of the low, moist and heated valleys of Alpine countries. Indeed, most, if not all the various forms of endemic diseases are legitimately attributable to such local influences and their inevitable effect, a special diathesis. Nor is period of life less cogent and specially operative in giving rise to marked proclivities to diseases of different kinds and in fixing a characteristic grade upon morbid action. Illustrations of this proposition will be found in the great susceptibility of children and young persons, to diseases of high excitement, convulsions, &c.; of persons between the ages of eighteen and thirty-five years to febrile diseases, and in the peculiar abnormities of those in advanced life. In the former, high nervous impressibility is the predominant constitutional characteristic, in the latter, sluggishness of the circulation; and, therefore, the great tendency to diseases, originating in passive congestions, and the readiness with which hydropic affections are induced. Sex, too, exercises a striking influence over the constitution, not only as regards particular forms of disease, but as regards grade, also. Hence it is, that males are remarkably more prone to maladies of an inflammatory kind than females, while the latter, being vastly more sensitive and excitable, as also of comparatively lax and delicate fibre, tend strongly to nervous, anaemiæ, and, therefore, asthenic diseases. The predominance of certain organs or functions of the economy often induces a notable tendency to diseases of a definite character and marked by an obvious grade, as the brain, the liver, and the pulmonary or respiratory organ. Hence the familiar phraseology of medical writers, not of the present merely, but of all past time—the apoplectic, the biliary, the phthisical habit, etc.

But, again, there may be an acquired diathesis, so far as a condition that induces a proclivity to any single disease is con-

cerned, while the grade will depend upon other circumstances, as of climate, vocation, general mode of living, &c. This will be noticed in the readiness with which many diseases are reproduced, under the influence of the slightest exciting causes. Familiar examples of the truth contained in this proposition will be found in the frequent repetition of tonsilitis in those who have suffered from the disease. So, likewise, of abortion, and of the variety of convulsive affections of children and young persons, as well as of those forms of disease that are characterized by periodicity, as neuralgia, hysteria and intermittent fever.

There is, too, what we think may be regarded as a dyspeptic dyathesis—a condition of the chylopoietic viscera, that tends, with singular certainty, to engender, in not an inconsiderable class of persons, the category of symptoms or phenomena, which therapeutists have, by common consent, denominated dyspepsia.

Whether this state of parts or of the vital susceptibilities is an original, inherent endowment, or the offspring of errors in the use of diet, and other irregularities, is not material. In either case, the effect is the same, and appropriate exciting causes uniformly produce the same, or quite analogous, symptoms. Considered in these various relations, the condition of the economy, expressed by the term diathesis, has a near affinity to predisposition. It differs, however, materially from the latter term, in significance, for, while regarded as, in different persons or classes of persons, a condition either anatomically or physiologically, which, when certain exciting causes are made operative, or appropriate coinciding conditions are brought into existence, gives rise to a character of disease which implicates a given set of organs, structures, or tissues, and offers but little variety as regards symptoms, progress, and termination, as a technical term of comprehensive meaning, it embraces, as already suggested, the idea, in addition, of type, or grade, or both, to neither of which predisposition has any relation. Viewed in this aspect, it contemplates vitality —the actual condition of life, or life force, as strong or weak, or in a condition intermediate between the two, and hence, of all possible degrees of difference. We repeat, it covers and includes all the varieties and modifications of vital energy, impressing upon every pathological state an aspect and a character vitally important, to the success of practice and to the progress and stability of medicine as a science.

There may be those, who are not inclined to attach so great a breadth of meaning to the word as we have, in the foregoing remarks. We feel convinced, however, that the doctrines we have put forth, will be fully sustained by an extended and intelligent consideration of the subject.

We deem it not inappropriate, here, to remark, that a well defined diathesis often acts as a prophylactic against other diseases than that to which the habit strongly tends. Hence persons, in whom an acquired disposition to tonsillitis obtains, are seldom attacked with bronchitis, pleuritis or pneumania, and a like fact will present to the observing practitioner, as regards dyspeptic subjects, such being rarely amenable to other diseases than those, in which the stomach and callatitious viscera are principally implicated. Now, if we have succeeded in defining the true significance of the term, *diathesis*, the importance, nay, the necessity, of studying its actual character, in every case of disease, whatever it may be, pathologically, will be apparent. Nor will it be questioned that it is equally necessary to study, with special care, the general influence of the prevalent epidemic cause, upon every variety of disease that may occur while such cause prevails. For, although there be a prevalent diathesis, during the continuance of any given epidemic, as of variola, rubiola, scarlatina or erysipelas, and though a character of sameness may necessarily impress itself upon the general treatment, *we* cannot doubt but the experienced therapeutist will meet many examples of the same general disease, so widely different in type, or grade of action, as to require striking modifications in practice.

We come, now, to consider, briefly the influences operated upon our therapia, by the views we adopt in reference to the subject under consideration.

Such is the structure of the human mind, that, if it accept a particular hypothesis, or if it go beyond this, and constructs a theory in regard to any subject or occurrence, and action follow as a necessary sequence, that action will always accord with such hypothesis or theory. This is inevitable if consistency be intended, and such generally is intended. We repeat, then, the mind, in a normal state, cannot act in contravention of itself. It follows, therefore, if the practitioner accept, as a dogma, that, since a given period or event, the diathesis of the species, or of the people of a country, or a restricted locality, has undergone a marked and permanent change—if, for example, he assume, with Tully and certain others, that, whereas prior to 1810, when pneumania typhoids was epidemic throughout a great portion of our country, or, to 1832, when cholera first appeared as an epidemic, there prevailed a general sthenic diathesis, and diseased action assumed

an acute, inflammatory character, requiring active depletory measures to subdue it; but that, since one or other of these periods, the diathesis of the people is changed—that it is, and has been, unvaryingly, and without exception, asthenic—that there is, therefore, no such thing as inflammation, in its primitive sense, it needs not the gift of prophesy to divine what his general treatment of disease, and of all diseases will be, whether called upon to prescribe for an isolated case of some sporadic malady, or to contend with a destroying epidemic. Nor will the influence differ, if he allow himself to believe that, since the prevalence of erysipelas, epidemically, in 1843, a like change of diathesis has taken place, and that certain desirable results of therapeutical measures are not to be attained. In either case, he will be inclined to regard morbid action as a unit, and to treat all diseases in accordance with some special plan, equally founded upon hypothesis or blind and unexplained, perchance, unexplainable dogma, regardless of true pathology, symptoms, progress or termination.

He is, in truth, on the high road to empiricism. Indeed this is but one form of empiricism. It was on some not widely different dogma, that the systems of Thompson, Hahnemann and Praesnitz were founded, and in the history of these truly empirical systems, the intelligent observer cannot fail to perceive the real origin of all,—the history, progress and results of all like systems that have preceded, or may, in the progress of accumulating generations, succeed them. Denying, emphatically, the truth of the dogmas above referred to, and holding that the history of our science affords no foundation for the conclusion, that any particular diathesis is universally prevalent, modifying and changing permanently the character of morbid processes and action, we deduce that the practitioner who allows his mind to be thus trammeled, perverted or resistlessly controlled, must, in strictness, be looked upon and appreciated, as neither more nor less than an empiric. He may have learning of a certain kind,—he may be characterized by goodness of heart and gentlemanliness of deportment, even, but "the leopard's spots are not, nor can they be changed," while he allows himself to be thus inthralled. In medicine, if in no other department, dogmatism leads to empiricism. From empiricism, the discent to routineism, is direct, easy, and natural, and this stage; not of progress, but of retrogression, attained, constitutes the unqualified and complete consummation, nay the culmination of opprobrious fogyism. Nor is length of years essential to this reproachful, this debasing professional attitude. He who allows such prostitution of the noble powers conferred upon him by the God of nature, though young, is not less *an old*, an unmitigated fogy, than is he who has transcended the age of three score years and ten. K.

Article III.—PRACTICAL SUGGESTIONS, NO. 1.

BY J. ADAMS ALLEN, M. D.

A catalogue of the diseases of Kalamazoo during the winter just closed, would be but little more than a recapitulation of those of the previous winter.

There has been nothing to characterize the season as unusually healthy or the reverse.

For the want of frightful accidents, devastating epidemics, or remarkable cases, in which to find free scope for professional ambition, and thus satisfy a laudable penchant for a "status" in our glorious profession, we have been reduced to the inglorious task of revising our modes of treatment of common place disorders.

Can a man draw blood from a turnip, or strike sparks from a cucumber? If not, it would seem hopeless to venture any inroad upon the cherished routine. Perhaps some great light, better seen by the aid of *three lesser*, may again prompt our assassination by resolution, if we even surmise the possibility of useful innovation.

Men are oftentimes guided in practice by an obscure apprehension of principles they do not clearly apprehend, at others their practical methods are utterly at variance with the truths they unqualifiedly admit.

Both these propositions are emphatically true in medicine. *A priori* of course we should never judge that substances which form no part of the integral constituency of the human body, would be useful in the cure of disease; yet we have used them by and with the advice and consent of the Delphic oracle, Experience.

The great trouble is that the oracle too frequently gives utterance to a conclusion, from an Enthymeme with the suppressed premises *not* understood.

This is all the worse from the fact that experience accumulates rapidly in every day diseases, whereas in rare cases even its most servile followers fear a blind guide. Hence there is little hazard in the assertion, though it may seem a "paradox" or

a "dogma," that the art of medicine has in fact acquired greater perfection in the treatment of rare and previously occult cases of disease than it has in cases of diurnal occurrence.

The former are treated in logical conformity to the established and indubitable premises furnished by enlightened physiology and pathology—the latter as predicated upon the "undistributed middle" of a lengthy and loose experience.

Per centages of cures or escapes, are all very well in their way, but pray what do they prove?

The "pathists," of all prefixes, do even the same, as the Egyptian enchanters imitated Moses. They bring their multiplication table also to show that they are by no means unskilled in figures.

——"Facies non omnibus una,
Nec diverssa tamen; qualem decet esse sororum."

In our opinion the statements so broadly made, that the advance of discovery in physiology and pathology, with their subordinate sciences, can do little, if anything, for the improvement of therapeutics, is a most unmitigated calumny upon the art. It shows a hankering after the leeks and onions that seasoned the flesh pots of the land where darkness could once be felt, and ever ought to be held in the extremest distance. There is where the plagues were. And yet we are asked to delve among the incongruous farrago of old prescriptions, to find, if possible, something that is not merely ridiculous.

The great necessity now is to abstain from officious interference by administration of drugs; and this is precisely what physiology, (both normal and abnormal,) especially teaches. And here we may remark that physiology nowhere involves that, as has been said, substances which form no part of human tissues or fluids, are improperly employed for the relief of their derangement. It does show most conclusively that foreign articles, taken into the system, materially modify existing forms and actions in the body, many of which modifications are essential to the maintenance or return of health. And this they may do without marring or changing, in the slightest degree, the elementary composition of the fabric. Is the chemist unable to explain this? By no means—the parallel is found every day in the laboratory.

But physiology gives more than merely the explanation of probable modes of action of drugs.

It points definitely to sound dietetic rules and regimen, without the observance of which any system of medical practice will sink to the despised level of "exclusive," or "one idea."

Take, for instance, the report on the diet of the sick, made by Dr. Hooker, before the American Medical Association, a year or two since. That paper, in our humble opinion, was alone equal in value to all the other productions of that learned body since its creation. There is more practical force and sound doctrine in it, than in any single volume or in any two volume treatise on mat. med. extant. Yet there are few who have read—fewer still who have practiced by its precepts.

One-fifth of the race die of tuberculous disease—yet we go on giving expectorants, tolerating inhalation, inserting the probang, and permitting hydromania.

Nauseating with Ol. Jec. aselli—eschewing pork and fat roasts of beef.

Thin skins, thin blood, and weak muscle, are pampered with farina and confectionery.

Hydragogue drenches are followed by hydropathic soups and diluted abominations.

Breaking down with Venesection, Cal. and Antim., to build up with Bark and Iron.

Half moralist, half quackish, denouncing the healthful dance and encouraging those—

> "Doomed to force, by unrelenting knocks.
> Reluctant music from a tortured box;"

And so on through the long catalogue of irrational procedure. It is easier for the physician to write a druggist's order, than to make a check upon the intelligence of his patients.

Practically we have found that the languor and lassitude, the headaches and stomach-aches, the "billious symptoms," &c., of a great variety of patients are readily controlled by simple reference to the manifest rules of hygeine.

Glorious horseback riding has proved more efficient as an emmenagogue than iron and aloes, bark, *et id omne genus.* R. Air and exercise, food and sleep. S. To be taken according to good sense. This is a prescription vastly better than the mithridate or polypharmacy of Huxam.

The great trouble is that patients will insist upon having something in the shape of drugs or active measures, however preposterous they may appear.

Hence they are prone to quit calomel and jalap and go quixotting after infintesimals.

Every physician knows that his patients pay for drugs much more readily than for advice. Ten to one, if no medicines are dealt out, they take their hats and start for the office door without ever thinking of any fee.

The true way is to charge that patient a larger fee who is permitted to escape without medication.

The physician ought to aspire beyond being a mere dispenser or adviser of drugs. If placed in the position of the celestial physician, he would better understand his true mission. It is said the mandarin pays the doctor for the time he is well, and deducts for any sickness.

Would this rule work any change in our practice?

Personally, I am a stickler for drugs, but believe that if they do no good they do harm.

When sudden and violent changes impend the vital fabric, there is no justifiable excuse for withholding the energies of the materia medica; but in a vast number of instances there is no need of bottles, vials or gallipots.

Article IV.—CASES.

BY A. R. TERRY, M. D.

CASE OF CARIES OF THE CANCELLAR STRUCTURE OF THE FEMUR.

W. W., son of Capt. J. A. W., U. S. Army, a rather thin, light complexioned boy of five years old, or thereabout, was, in August, 1852, kicked by a young, unshod colt, on the upper and outer portion of the left thigh. The immediate consequences of the accident apparently disappeared in a day or two.

In the March following he began to be lame, and the region of the injury became painful. Hip disease was suspected. In June a swelling appeared at the seat of the injury, (about two inches below the greater trochanter) and extended gradually down the thigh. The usual counterirritant treatment was adopted, and he was kept from walking until the last of September. Fluctuation was discovered soon after, and the abcess was opened early in December, 1853, about three inches above the knee. The quantity of pus discharged I have no means of knowing. I should have said that this occurred at

Fort Belknap, where Capt. W. was stationed. For some months the boy was apparently well, the opening having closed and the lameness disappeared.

On the 4th of February, 1854, the troops were ordered from Fort Belknap to San Antonio, and, on the journey, the boy fell and bruised his thigh on a stone. This caused the abscess to form again, and it opened spontaneously, about three inches below the trochanter. While at San Antonio he had a severe attack of remittent fever, and the leg became very much emaciated. On the 16th of June he left San Antonio with his parents, and arrived at Georgetown, D. C., on the 9th of July. His health rapidly improved here, but a discharge still continued from the last opening. Professor Mutter saw him in Philadelphia in November, and expressed the opinion that there was necrosis of the femur, but advised to delay an operation for some time, unless the health should materially suffer. Prof. Mutter also saw him in Jan. 1855, and repeated the opinion and advice

In the autumn of 1855, I first saw, and examined him, in conjunction with Dr. Pitcher. The thigh was somewhat smaller than the other, and although he said it did not hurt him to walk, there was an evident favoring of that leg; a perceptible limp. There was some pain, generally at night. Occasionally this was severe. Quinine would generally relieve it for a time. The fistulous opening was about three inches below the root of the trochanter, its mouth surrounded with flabby granulations. It discharged constantly a little ichorous matter, and, at times, a little healthy pus. A probe introduced passed obliquely upward and outward to the bone, which was found denuded and rough. The diagnosis was the same as that by Dr. Mutter. Necrosis. Still, as although the thigh was small and the tissues relaxed, no enlargement from newly deposited bone could be perceived, it was determined not to operate until either there was better evidence of a sequestrum, or the health of the patient should suffer.

During the winter of 1855–6, the boy's health was tolerably good, but in the spring of 1856, it perceptibly failed, and there was an approach to hectic. Early in May Mrs. W. brought her son to Detroit, and another examination was made by Dr. Pitcher, Dr. Gunn, and myself. The diagnosis was the same as that arrived at previously, necrosis of the femur near the

greater trochanter, and an operation was determined on. On the 14th of May, assisted by Dr. Pitcher and Dr. Gunn, I performed the following operation.

Partial Anæsthesia was procured by chloroform, the state of the pulse precluding a further use of the Anæsthetic.

An incision was made through the *Fascia lata* and *Vastus externus muscle*, commencing about an inch above the fistulous opening, and extending downwards about four inches; this incision was carried down to the bone. On examination, it was found that (such was its obliquity upward) the whole of the fistulous canal had not been included in the first incision; it was accordingly prolonged upward for more than an inch. The finger now being introduced, discovered a funnel shaped cavity, with rough edges, about half half an inch below the root of the greater *Trochanter*. This admitted the point of the fore finger. No other denuded bone could be found.

A small gouge chisel and a mallet were used, and the bone was chipped away around the cavity, until, in the cancellar structure of the bone a small point of suppuration was found. The pus was but a few drops in amount, but around it was a gelatinous mass, with small spiculae of bone, the whole not larger than a filbert.

The diseased part of the bone was all removed, as was a portion of the cancellar structure around it. A tent, smeared with Basilicon, was introduced to favor suppuration and prevent too early closing of the soft parts, above the removed bone. The rest of the incision was drawn together by interrupted sutures, and dressed with adhesive straps. The next day the patient had an epileptic convulsion, but, with this exception, no untoward symptoms supervened. The tent was removed on the fourth day, as free suppuration was established. A large portion of the wound closed by the first intention. About an inch of the track of the old sinus remained open for a good while; but one or two applications of nitrate of silver closed this. Infusion of sarsaparilla with hydriodiate of potassa was freely used, at intervals for some months.

The leg is now apparently sound, and has recovered its plumpness, and the child is in better health than at any time since the accident.

CASE OF OBLIQUE FRACTURE OF THE FEMUR. PREVIOUS SPONTANEOUS DISLOCATION.

About the first day of March, 1856, I was called to see J. S., aged 24, a machinist. In a friendly scuffle in a room, he had fallen, and suffered an oblique fracture of the right femur, about the commencement of the upper third. He informed me that he had suffered from hip disease, when between seven and eight years of age, which had resulted in spontaneous dislocation, but without any external opening. He said that the leg was supposed to be shortened about two inches, and that the toe had been considerably turned in. On examination, the dislocation upward and outward was easily ascertained, I anticipated some trouble in making the proper extension, in consequence of this state of the thigh. I used Liston's long straight splint, with some modifications of which, I will hereafter speak, and found no difficulty in making the extension. I took particular care to keep the toe well inclined outward, by tying the upper edge of the lower portion of the splint to the bed post. In this way, I could exactly regulate the inclination of the toe outward. The cure progressed without any untoward circumstance, and in forty days I removed the splint, substituting supports of pasteboard, and got him on crutches.

When the patient was able to dispense with crutches, he declared that the leg was considerably longer than before the accident. This of course I cannot believe, but it is certain that there is no inversion of the toe; and those who knew him before the fracture, say he walks much better than at that time. By careful measurement, I have ascertained that there is now very little over an inch of shortening, so that there was probably a mistake in his statement, in regard to it.

I have been in the habit of using Liston's splint, in almost all cases of fracture of the femur, for some years, with the modifications alluded to above, and with uniform success. I will now advert to them. In place of a roller around the leg and splint, making the extension by means of turns through the notches in the end, and over the heel and instep, I use separate strips of muslin around the limb and splint, each one tied separately; and I use another method of extension, which I will describe. The advantages of the separate strips of muslin, are, that the surgeon can regulate the pressure on any particu-

lar part, as may seem expedient, that the point of fracture can be easily examined, and that, in the event of increasing the extension, the lateral pressure of the splint can be at once relaxed, and all this without raising or moving the limb.

The principal objection to the extension, as recommended and figured in Liston's Surgery is, that by it, the *foot* is so extended in the direction of the axis of the leg, that in a few hours intense pain is produced, and few patients can bear it without frequent lettings-up. I have tried, in vain, to obviate this while using the bandage for extension; in passing over the instep (if sufficient tension is used to make the necessary extension) it will extend the foot on the ankle, in the same way as if, in standing, a man were to raise his heel two or three inches from the floor, and point his toe downward. I have used two methods of obviating this.

In one (after bandaging the limb from the toes to above the fracture,) I put two thick woolen socks on the foot; over these I put a buckskin moccasin, extending well above the ankle and tightly laced in front. To the sole of the moccasin, exactly in the axis of the leg, are sewed two or three strong tapes; by tying these tapes to the notches of the splint, any required amount of extension can be made, while the motion of the ankle joint, within a certain limit, is not interfered with. The principal objection to this method is, that a proper moccasin is, often, not easily to be obtained. In other respects, I look on it as the best method with which I am acquainted.

In the other method of making the extension, I have a narrow bag made of strong muslin, about three-fourths of an inch in diameter, and about 24 inches long; this should be well stuffed with wool or cotton, (wool is better,) and the ends sewed together so as to make a circle. After well padding the heel and instep, the circle is slipped over the foot, and tied by strong twine opposite each ankle, so as to leave a loop on each side of the foot, while the ankle is embraced by the part inclosed between the ties. These loops serve for the attachment of tapes which are to be tied to the notches of the splint for the extension. Of course the stuffed bag must be made longer or shorter, as the ankle is larger or smaller.

In both ways I have been enabled to make powerful and long continued extension with very little pain to the patient.

Article VI.—FRACTURE OF THE CRANIUM AND OPERATION.

BY JNO. AVERY, M. D.

On the 29th day of August last, I was called to see a lad about 10 years of age, who, a few hours previous, had been thrown from a horse, and sustained a severe injury of the head. I saw him about three hours after the accident, and found him insensible, with the scalp much bruised, and tumifiel over the right parietal bone. The extremities cold, respiration slow and imperfect, pulse about 50 and intermittent. An examination of the wound with the probe revealed the sharp edges of the fractured cranium. Symptoms of prostration were so urgent that an operation was not deemed advisable until reaction, in some degree, could be established. With that view, friction was directed to be made to the extremities with hot flannels, and brandy sling to be cautiously administered every half hour.

Aug. 30th, 7 o'clock, A. M. Found the patient with a little more fullness of the pulse, the temperture of the extremities slightly augmented, and the patient extremely sensitive to the slightest touch of the wound, though still unconscious. I determined to operate at once, assisted by Drs. E. Fish and S. M. Bayard.

The patient was brought cautiously under the influence of chloroform, the pulse becoming slightly accelerated during its administration. Anæsthesia was complete, and the patient was continued under its influence during the entire operation, which lasted about two hours and a half.

Having shaved the hair from the entire right side of the head, an incision was made, commencing just anterior to the ear and continued to the sagittal suture, and another transversely just above the temporal ridge. The flaps were turned back and the fracture fully exposed, which was found to extend in length from the base of the cranium to the sagittal suture, and averaging about one inch in width, involving the parietal bone and the squamous portion of the temporal. Six pieces of bone were removed with the forceps and cutting pliers. A lateral fracture was found reaching backwards to the lambdoidal suture, with the superior portion of the bone depressed and overlapping the inferior. An incision was carried along its course,

and with much difficulty the fractured portions were brought in apposition. The Dura Mater was found uninjured. The bleeding was inconsiderable.

The wound was carefully sponged with warm water, the flaps brought together and held in position with the interrupted suture and a few straps of adhesive plaster, over which was placed a slight compress and bandage. The operation was borne remarkably well, and produced but little or no perceptable effect upon the pulse. It still remains slow and intermittent. The patient was placed warm in bed and ordered brandy sling and carb. ammonia every half hour. Saw him again at eight o'clock in the evening—pulse about 55 and intermittent—pupils widely dilated and extremities cold. Brandy and ammonia continued, with warmth applied to the extremities.

Aug. 31st, 8 o'clock, A. M. Found the patient with pulse about 60, and the temperature of the surface slightly improved. Continued the brandy every hour without the ammonia. Saw him again in the evening and found reaction slowly taking place; pulse 65, occasionally intermitting; pupils natural and temperature nearly natural. Discontinued the brandy and directed chicken broth to be given occasionally during the night.

Sept. 1st, 9 o'clock, A. M. The patient had rested well through the night. Pulse about 75 and slightly intermittent. Temperature natural. Continued the broth.

Sept. 2d. The little fellow looks bright this morning, and converses with his mother—the first time he has spoken since his injury. Pulse about 80, soft, and has entirely lost its intermittent character. Gave no medicines and nothing except a little gruel *ad libitum*. Directed the dressings to be occasionally wet with tepid water.

Sept. 3d. Patient much the same, and treatment the same as yesterday.

Sept. 4th. Had been somewhat restless through the latter part of last night. Pulse 95; surface hot and dry. Removed the dressings. Wound looks healthy and is beginning to granulate. Moved the bowels slightly with the sulphate of magnesia, and gave a Dover's powder at night.

Sept. 5th. Passed a comfortable night and is feeling quite lively this morning. From this time on, convalescence was steady and uninterrupted. On the 7th I removed the stitches.

The wound was in good condition and the patient able to be bolstered up in bed. In four weeks from the operation he was walking about the room, and the wound; except its lower fourth, entirely closed.

This case is interesting so far as it illustrates the recuperative powers of nature, aided by a good constitution in the young. Also from the fact that chloroform was administered and borne with happy results, while the patient was laboring under compression of the brain, with the circulation much obstructed and feeble. And perhaps, also, from the slowness with which reaction took place, and when it did occur, that it at no time was carried scarcely beyond the point of health.

Otisco, April 16th, 1857.

IODOFORM.

A new preparation of iodine, discovered by Sevillos, and more especially brought to notice by M. M. Dumas and Bouchardat, possesses properties which promise to make it a valuable addition to our means of employing, with benefit, this important therapeutic agent. It presents itself in a solid state, in the form of small pearly particles, of a sulphur-yellow color, friable, soft to the touch, and with a very enduring aromatic odor. It contains more than nine-tenths of its weight of iodine. It is sweet to the taste, and is not corrosive.

It destroys animals in a smaller dose than iodine, after having produced more or less depression, and rarely produces vomiting. This depression is followed by a stage of excitement, convulsions, contractions, &c. Iodoform does not produce the least local irritation, not producing the slightest increase of vascularity of the mucous membrane of the stomach and bowels.

Its therapeutic properties are thus arranged: 1. In consequence of the large quantity of iodine which it contains, it can replace iodine and the iodides in all the cases in which these are indicated. 2. It is absorbed with the greatest facility. 3. It has the advantage over all other preparations of iodine of never causing any local irritation, or any of those accidents which render the suspension of iodine necessary in certain cases. 4. In addition to the properties it enjoys in common with iodine, it has advantages peculiar to itself; it allays pain in certain neuralgic affections, and produces a sort of local and partial anæsthesia of the rectum, when introduced into that organ. 5. It may be given in doses of from five to fifty centigrammes a day. 6. The principal diseases in which it has been employed with advantage are endemic goitre, scrofula, rachitis, syphilis, certain affections of the neck of the bladder, or of the prostate, and certain neuralgic affections. 7. It forms, with the greatest facilities, most important pharmaceutic preparations.—*Arch. Gen. de Med.*

SPIRIT OF THE MEDICAL PRESS.

ON THE HASCHISCH OR CANNABIS INDICA.

BY JOHN BELL, M. D., DERRY, N. H.

[From the Boston Medical and Surgical Journal.]

The various periodicals of this country have abounded, during the last few years, with accounts of the Haschisch; every experimenter giving the history of the effects it has had upon himself. In most cases this has been mingled with much fanciful and irrelevant matter. These notices have been confined almost exclusively to the various popular literary journals; but it has not received the attention it merits in those exclusively devoted to medicine. Under these circumstances, the following *resume* of what has been written on the subject, seen through the medium of personal experience, may not be destitute of interest.

Among the nations professing Mahometanism, there are not a few substances used as substitutes for the alcoholic liquors interdicted by the author of that religion. They are everywhere the most inveterate users of tobacco, opium, coffee, and a variety of other narcotics less generally known. Among these latter, no one has recently attracted so much attention as the *Haschisch*, Cannabis Indica, or Indian Hemp. It is only within a few years, comparatively, that a knowledge of it has come to us; but it has been in general use for many centuries at the East, and reference is even thought to have been made to it by the ancient classic authors. The novelty of its effects, and its apparent harmlessness, have induced travelers in Egypt and Asia to experiment upon themselves, and a knowledge of it has thus found its way to the nations of the West. The defective pharmaceutic processes employed by the inhabitants of its native countries, render its preparations of very different strength, and admixtures of various foreign substances make its effects uncertain. A specimen obtained from Damascus contained about twenty-five per cent. of opium, a considerable quantity of camphor and spices, and nearly half was a mixture of rancid butter and extract of hemp. The substance widely known in this country under the Arabic name of *Haschisch*, is obtained by boiling the leaves and flowers of the plant with butter, and, when pure and carefully prepared, is a very active preparation. The extracts prepared in this country from the Indian plant, contain all the properties of the *Haschisch*, and are every way preferable to it. The common hemp, though believed by botanists to be a variety of the same species as its Indian congener, is entirely destitute of the property which distin-

guishes the latter. This difference alone, if found to be permanent, would be sufficient to cause them to be regarded as distinct species.

The action of the drug is not confined to any single part of the system. It is an efficient but slow cathartic, an active diuretic and sudorific, and a most irresistible hypnotic in the latter stages of its action. But it is better known for its effect upon the nervous system; it is for this object that it is extensively employed in the East, and it is in this connection that it possesses its greatest interest. Abundant personal experience of it leads me to think that its peculiar effects upon the nervous system are only a secondary result of its action upon the mucous membrane throughout the whole track of the alimentary canal. The slowness of its action, not commencing in less than two hours after the dose is taken; the sensation of dryness, and afterwards the abundant secretion in the throat and mouth; the heat thro'-out the abdomen, and the soreness which persists for several days; and, finally, the absence of any symptoms of nervous debility, when the immediate effects are gone, all point to this as its *modus operandi*. It would seem as though it were absorbed, and that in this process of being thrown off, it occasioned those phantasies which have caused it to be used as an intoxicating agent. In the dose usually recommended, of from one to three grains, it is absolutely inert; five grains are the smallest quantity from which any perceptible effects are to be expected, and generally more will be required. Few persons, perhaps, who have read the brilliant "Confessions of an English Opium Eater," have been without a fancy to experience the wonderful effects there described: all who have yielded to the desire have been disappointed. If any one supposes the intoxication of *Haschisch* to be of the same nature, a few grains of the drug will most efficiently purge him of the idea. On the first trial, one is generally frightened at the intensity and violence of its action, and few will be disposed to carry the dose beyond ten grains. Indeed, most will be amply satisfied with having once experienced it. The following were the results of a moderately large dose of Tilden & Co.'s extract.

It was taken with coffee, which increases the effects of the hemp, and at the same time diminishes its duration, perhaps merely by promoting a more rapid absorption. For two hours no results at all were experienced. At this time a dryness seemed to commence at a particular spot in the throat, and a feeling of warmth throughout the abdomen. These were not the results of a disordered sensation, for a clammy mucous soon began to be secreted, though the huskiness of the throat still remained. Up to this time there was not the slightest excitement or confusion of thought. Suddenly, however, an idea having no connection with the train of thought passing in the mind at the time, appeared, as though suggested by another person, and then was gone again as suddenly as it came, leaving upon the mind much the same feeling as when one escapes from a dream or a deep reverie. The same thing was repeated two or three times, at intervals rapidly diminishing in length. Even now I can hardly believe but it was the result of strained attention to my physical sensations, for the gentle warmth of the abdomen was rapidly becoming a burning heat—still, however, not by any means unpleasant—and the dryness of the throat had extended to the tongue.

I had taken the drug with great scepticism as to its reputed action, or at any rate with the opinion that it was grossly exaggerated, and I accordingly made up my mind not to be "caught napping" in this way again, and to keep a careful watch over my thoughts. But while enforcing this resolution, as I supposed, I found myself, to my own astonishment, waking from a reverie longer and more profound than any previous. From scepticism to the fullest belief of all I had read on the subject, was but a step. Its effect so far surpassed anything which words can convey, that I began to think I was on the verge of narcotic poisoning; yet, strange to say, there was not the slightest feeling of inquietude on that account. I resolved to walk into the street. While rising from the chair, another lucid interval showed that another lucid interval had come and gone. While passing through the door, I was aware of having wandered again, but how or when I had permitted myself to fall into the revery, I was perfectly unconscious, and knew only that it seemed to have lasted an interminable length of time.

These singular attacks of mental disturbance recurred oftener, and lasted longer, till the lucid interval between was reduced to a mere instant's conscious duration of thought. This condition came on so rapidly, that in less than fifteen minutes from the time of my being aware of the first mental disturbance, the power of controlling the thoughts was almost completely lost. All ideas of time and space were especially bewildered, and I realized completely, for the first time, the ideas of some metaphysicians, that time, properly speaking, has no existence except in connection with a succession of mental operations or sensations. The most trivial circumstance, the slightest noise, gave rise to trains of thought, which went bounding from subject to subject, completely emancipated from the rules which ordinarily govern the mental operations, till suddenly some other circumstance would give an entirely new direction to them, and the last series of imaginations would seem to have lasted from eternity, even while the eye was fixed upon the clock, the hand of which had not perceptibly moved.

Now, a phenomenon still more singular began to exhibit itself. I felt that, in spite of all exertions, I was beginning to receive the suggestions of disordered fancy for real objective facts. Intellectually, I knew that the spinal column could not be a barometer. An unpleasant sensation in the lumbar region suggested the idea of a heavy column of mercury pressing upon it, and, at the time, and under the circumstances, the transition to the idea of the barometer was easy and natural. There was no ballancing of arguments in the arrival at this conclusion; there was no half-way period of doubt and uncertainty, to emerge into full credence. At the instant the idea occured at all, it commanded the assent with the same fulness as when in perfect mental health, does the idea of our own existence. The thought certainly occurred that it was a delusion, but it made no more impression than the suggestion would, that the sense of sight was a figment of the brain, and objects seen had no existence except in the imagination. This belief was not a transient one; it was the first hallucination to appear, and continued with varying degrees of intensity, as the thoughts were more or less occupied with other subjects, till all others had disappeared. The belief in the reality of the delusion was never for an instant absent; it per-

vaded the whole being, and was often the point on which the thoughts turned seemingly for a long time. The painful attempt to regulate these disturbed states of consciousness, was soon given up, and, half voluntarily, half by a species of moral compulsion, the whole pyschical nature surrendered itself, without further trouble, to the fullest and most complete belief in the actual existence of a thousand hallucinations. During this time the thoughts were becoming more and more disordered; ideas, between which, apparently, there was not the slightest connection, thrust themselves in, till finally their rapid recurrence, and the loss of that sense of governing the mind which we ordinarily possess, indueed the belief that I was the victim of diabolical agency—that some terrible demon had taken possession of my whole intellectual being, and identified himself with every thought, in the same way that a man might direct the physical movements of a child. The feeling of utter powerlessness to check the wild current of thought was complete, and there was a sensation as though, if there had been the ability, the will could not be exercised.

The firmest intentions were forgotten in an instant. There seemed to be no difference between the idea and the expression of it in words. A moment was long enough to forget whether it had been expressed or not. The sound of persons whispering in the room, brought with it the belief that they were laying some plot. It was not a vague suspicion that they were intending some injury, such as whispers and glances might excite in any one; but everything that they said—the particulars of the whole plot—were present, with the same vividness and overpowering conviction as they always are in true hallucinations.

The *fantasia* had now arrived at its height. It was an hour and a half since the first sensations of wandering and excitement commenced. About the same time passed before it had completely subsided. The mental phenomena in this stage were as remarkable as while the effects were coming on. One after another the delusions disappeared as rapidly as they came; not by any exercise of the gradual returning regularity of thought, but suddenly, with a bound, so that it was surprising to have believed, a moment before, what now appeared so absurd.

The whole time during which there is any perceptible difference from the normal state, is from three to five hours, according to the dose taken. The hemp resembles in its action some other medicines which are erroneously called cumulative. That is, a dose may be taken without producing any perceptible action; and on another occasion, a dose only a grain larger will act violently. Indeed, the effects of this agent seem to be of such a nature, that there is no resting place between its full action and none at all. A delusion, of the truth of which we are only half convinced, would be no delusion at all. Unlike opium, alcohol, and other narcotics of the order Solanaceæ, it leaves behind it no mental confusion, headache, or other signs of a direct and powerful action upon the nervous system. The secretions of the alimentary canal, however, remain in an unnatural state for several days, and there is a slight oppression felt in the abdomen, if the dose has been at all large. During all the time of its action, there is a tendency to laugh in spite of the delusions, which are almost uniformly of an unpleas-

ant character. The feeling of buoyancy of spirits is somewhat the same as is caused by a slight dose of alcoholic stimulant.

Amid all the strange vagaries of the *Haschisch*, the mind preserves the power of taking cognizance of its condition, and to a certain extent of analyzing its operations. The memory of everything said and done is nearly perfect; but of the multitude of thoughts, only those making a more than commonly distinct impression are preserved.

Can this singular substance be put to any useful purpose, to illustrate any of the varied mental phenomena of health and disease? Is it worthy a place in the medical *armamentarium*, from its action alone upon the mind?

The great advances made in the philosophy of medicine during the last half century, have been due almost entirely to the devotion with which pathology has been pursued. Instead of the ill-arranged and ill-understood assemblage of symptoms observed with scrupulous care, which went to make up the idea of a disease, we now direct our aim to strip it of everything fortuitous, and to fix in our mind the type of the malady—those essential features which are uniformly the same under every variety of circumstances, and about which the more obvious symptoms cluster, like the drapery about a statue. In diseases of the mind, this has not been done: their seat and nature are too deep to be reached by the knife of the morbid anatomist. Esquirol, after a whole life devoted to the study of this subject, and after the most ample opportunities that have ever fallen to the lot of any individual, says, that "pathological anatomy is yet silent as to the seat of madness; it has not yet demonstrated what is the precise alteration in the encephalon which gives rise to this disease." Nor has greater success obtained in the attempt to explain the relations and analogies of the various forms of insanity. The cause of the latter failure is sufficiently obvious. Theory has taken the place of fact. No competent individual who has experienced insanity in his own person, has written upon the disease. The insane themselves can rarely give a consistent account of their disease, even if they were qualified, by previous study and observation, to take the best advantage of their own mental state. Even our own observation of the disease is rarely complete: the minor degrees do not come under the care of the physician, and it is only when the more severe cases are evident to all, that friends will acknowledge its existence and submit the unfortunate patient to examination. How imperfect would be our ideas of grief, anger, or pain, if we could only observe their outward manifestations, or listen to a description of it by one who had suffered them! And yet this is all, and more than all that we can know of the intimate nature of insanity, of its connections and analogies, unless we have suffered it in our own persons. If we have never felt any of the passions, our diagnosis of them might perhaps be as perfect, and the empirical treatment as successful, as now; but a vagueness would necessarily pervade our mind as to their nature, and we should be liable to continual error in reasoning upon them. Southwood Smith well observes, that the symptom of fever termed *febrile restlessness* cannot be understood by any one who has not experienced it in person.

The most superficial observation of a case of mania, will not fail to show many and strong points of resemblance to that of a person under the influ-

ence of a powerful dose of Cannabis Indica. In both there is the same excitement and abruptness of manner, the same rapidity and incoherence of thought, the same false convictions and lesions of the affective faculties. The following description, by Prichard, of an ordinary case of chronic mania, such as composes the greater number in the wards of every hospital, might apply, without the change of a word, to the condition of a person under the influence of the *Haschisch*. "It is, however, a state of great intellectual weakness, in which none of the operations of the mind are performed with energy and effect. The memory, the judgment, the powers of attention and combination, are so much impaired, that the individual is wholly inadequate to the duties of society, and incapable of any continued conversation; his actions and conduct are without steadiness and consistency, his thoughts are deficient in concentration and coherence."

There is no really important point in which these manifestations differ from the condition produced by the *Haschisch*. There is no error of judgment, no delusion or lession of the will or moral faculties, which is seen in the former state, but what might take its rise in the latter. In this question, the difference of cause of the mental disturbance might at first sight appear an insuperable objection to reasoning from one condition to the other. But is insanity always produced by the same cause? On the contrary, there is no disease to which the human frame is subject. that acknowledges such a variety. There is hardly a physical or functional lesion of any tissue or organ, but may produce it by its reaction on the nervous system, and it is difficult to say whether the best or worst proclivities of our nature are oftenest regarded as the productive agents of the same mental disease. If opium and tobacco and alcohol may produce, by long use, without any apparent disease, a mental state which deserves the name of insanity, why may not the *fantasia* of hemp receive the same name? What reason, then, is there why we may not rely upon its revelations as so many views of the hidden workings of the spirit, in that gravest of all diseases? If this be allowed, the *Haschisch* may in a degree serves as a key to unlock some at least of the mysteries of mental pathology. Why may we not thus possess a means of studying the disease in question, better than we have of most others? We can apply to it the principles of experimental philosophy, and test it by the best of means upon the best of subjects. The idea of this application of the medicine originated with Dr. Moreau (de Tours), of Paris a physician of large experience in his specialty, and whose work* on the subject possesses the highest interest, as presenting many views of insanity and kindred subjects, different from those commouly received.

In the study of insanity by this means, if there is any one fact impressed upon the mind more strongly than another, it is that of the essential unity of the whole psychical nature. It is impossible not to recognize the truth that the ordinary language of metaphysics is not applicable to the explanation of morbid mental phenomena. The popular division into the intellect, the will, the instincts and the moral faculties, though having a show of precision, and absolutely necessary in common language, conveys too much. Such divisions are too distinct and disconnected to be true to nature. The minute organilogical divisons and hasty generalizations of the phrenologists are only the results of the same principle carried to a greater extent.

[To be concluded next month.]

* Du Haschisch, et de l'alienation mentale.

OXIDE OF ZINC IN NIGHT SWEATS.

BY S. L. ABBOT, M. D., ADMITTING PHYSICIAN, AND PHYSICIAN TO OUT-PATIENTS OF THE MASS' GENERAL HOSPITAL BOSTON.

[Cnmmunicated for the Boston Medical and Surgical Journal.]

In a recent article in the Medical and Surgical Journal, on the treatment of the Nights Sweats of Phthisic, Dr. Coxe, of New Orleans, gave his experience of the efficacy of various remedies, particularly of the sulphate of zinc. He refers to the oxide of zinc, also, as recommended by Dr. Theophilus Thompson, as the best remedy for this annoying symptom. From personal experience he cannot speak of its merits, but proposes to try it on the first convenient opportunity; he however, is inclined, on the evidence of Prof. Wood, of Philadelphia, to regard the sulphate as the preferable form in which to administer the mineral.

In the London Lancet of October, 1854, Dr. Thompson speaks of the oxide of zinc. in combination with the extract of conium or hyoscyamus, as the very best remedy for the night sweats of phthisis. He recommends it in the dose of four grains of the salt to three grains of the extract, to be given in two pills at bedtime. Since that time I have been in the constant use of this remedy as occasion required, and can say, from my own experience, that I have rarely found any medicine meet so decidedly the symptom for which it is given. I have so much confidence in it that I always prescribe it first, and rarely meet with disappointment. I have made a synopsis of the accompanying cases from my note book, giving a condensed statement of the auscultatory signs in each with the duration of the disease, &c., that the reader may have an idea of the stage of the disorder at which the remedy was administered. I have omitted, in most instances, any reference to the treatment of other symptoms than the night sweats. The patients were all of them under my care as out-patients of the Massachusetts General Hospital. I find in my note-book many records of as many more to whom the remedy was given for the same symptom, but the record is incomplete from the failure of the patients to report themselves subsequently. The oxide of zinc, as a remedy for the night sweats of phthisis, has been most favorably spoken of several times, at the meetings of the Boston Society for Medical Improvement, within the last year or two, by Dr. J. B. S. Jackson, also by Dr. Wm. E. Coal, as well as myself. In no instance have I seen any ill effects from its use. In two or three instances patients have thought it regulated the bowels where constipation had previously existed. I have found the same relief to follow its use in private practice as in the case of hospital patients, but my notes of cases are not equally full. I give the cases in the order in which they stand on my books, with the statement of the amount of relief experienced as there recorded. They are all, with two or three exceptions, cases of unequivocal phthisis.

No 1.—Mary S., aged 30; married. December 1st, 1854. Cough of

seventeen months' standing. Occasional hæmoptysis ; sometimes blood mixed with sputa. No appearance of catamenis since the birth of a child nineteen months since. Child was weaned at sixteeen months. Profuse night sweeats. Much annoyed by nausea ; vomits several times daily. Kept awake at night by cough. A large cavity at the summit of the right lung. Patient has taken cod-liver oil, but the stomach cannot retain it. R. Acid gallici. gr. ij. before each meal. R. Zinci oxid., gr. iv. ; ext. hyoscyami, gr. ij., in two pills at bed-time.

7th.—Nausea less. Night sweats less, but not entirely checked- Bowels moved two or three times daily since last visit. Sleep disturbed by cough. Double dose of gallic acid. Add to pills one grain of opium.

14th.—Night sweats as at last visit. Nausea for last three days as bad as ever. Bowels regular. Patient reports herself as having been very constipated before coming under my care. Appetite poor. Continue treatment. *R.* Inf. gentian c., f dr i. bis die.

No. 2.—Martha. Ann. S., aged, 23, Seamtress. Febuary, 12th, 1855. An invalid for five years. Gave up work ten weeks since. Cough with free expectoration. Night sweats; hectic; emacation. Softening of tubercles at both summits, with cavernous respiration and gurgling beneath right clavicle. R. Ol- morrhuæ, f dr ij. ter- die. R. Zinci oxid., gr.iv. ; ext. conii, gr. iij., in two pills at bed-time

19th.—Night sweats much relieved. Nights easy. Continue. The use of the pills was continued until death, as occasion required, with complete relief to the symptom for which they were given.

No. 3.—John M., Jr., aged 22 ; currier. Feb, 13th, 1855- Ailing for five months. Cough, with some of the rational signs of phthisis. Frequent night sweats. Percussion less resonant in upper third of left front chest than right, with prolonged expiration at summit and moderate crackle beneath clavicle after cough. Wavy inspiration decided throughout left lung. Cod-liver oil and morphine were given, and nitrate of silver, gr. xl., aq. f oz. i., was applied to the throat.

20th.—About the same- Continue. R. Zinci oxid., gr. iv. ; ext. coiin, gr. iij., in two pills at bed time.

28th.—Night sweats less.

The patient returned occasionally until April 27th. The night sweats were very much diminished under the use of the zinc. Other remedies were employed, such as are usually given in phthisis, to relieve temporary conditions. Cod-liver oil and stimulants were taken freely.

No. 4.—Richard W., aged 45 ; bootmaker. Feb. 23d, 1855 Cough of sixteen months' standing. Rational signs of consumption. Occasional night sweats. Extensive softening of tubercles throughout right lung, with evidence of tubercular deposit at left summit.

March 18th.—Last three nights has had night sweats. R. Zinci oxid, gr. iv. ; ext. conii., gr. iij., in two pills at bed-time. Other remedies were ordered for other symptoms.

April 2d.—Night sweats but twice since 26th ult. The remedy was continued, *pro re nata*, until death.

No. 5.—Patrick H., aged 26; tailor. March 9th, 1855. Cough of 6 weeks standing, with rational signs of phthisis. Night sweats. No marked difference on percussion between right and left chest in front. Respiration rather feeble throughout front chest, with a slight click heard two or three times after cough and forced inspiration at left summit. Left back decidedly less resonant on percussion than right, at summit almost flat, with correponding feebleness of respiration, but no rales. Cod-liver oil.

17th.—The same. Night sweats very severe. Take two pills of zinc and conium at bed-time.

23d.—Night sweats as before. Substitute acid. sulph. aromat. gtt. xx. ter die for pills. The patient did not return.

No. 6.—Cecelia R., aged 24; married. March 21st, 1855. Cough of three months' standing, with rational signs of phthisis. Night sweats. Feeble respiration, with prolonged expiration at right summit on forced inspiration, without rales. Between right scapula and spine, a strong mucous rale heard several times after forced inspiration, with cough. For night sweats, two zinc and conium pills each night.

27th.—*No night sweats since*, until last night, when had a slight return of this symptom, which subsequently continued to be fully under control of the pills.

No. 7.—Bridget C., aged 14. March 23d, 1855. Cough of four weeks' standing. Dyspnœna night sweats. Percussion at left summit behind, quite dull. Very loud sonorous rales heard all over back, particularly marked towards summits, without moist rales. Respiration at left summit behind feeble.

In this case no relief was experienced from the use of the oxid of zinc; the dose, however, was not increased above four grains.

No. 8.—Catharine B., aged 21; tailoress. July 5th, 1855. An invalid during past five months, but cough dates back but three weeks. Percussion less resonant at right summit front than left, although not absolutely flat. Respiration at both summits front rude; at right apex feeble, with prolonged expiration and a decided crepitus with inspiration. Similar signs above spine of right scapula to summit, and between scapula and spine. Percussion of left back more resonant than over right, with respiration generally exalted, but not purely vesicular at apex.

August 12th.—Bad night sweats, &c. R. Zinci oxid., gr. iv., ext. hyoscpami. gr- iij., in two pills at bed-time.

16th—No night sweats last two nights. Continue, *pro re nata.*

Sept- 10.—No night sweats since. Has taken no medicine since last report.

No. 9.—Thomas L., aged 23; blacksmith. Nov. 20th, 1855. Cough of two months' standing, without expectoration. Pain in left breast, &c. Dyspnœa. Respiration in lower half of left front chest feeble, but audible; in upper half inspiration loud, wavy. At right summit posteriorly expiration abnormally loud and long. No rales.

March 4th, 1856.—Has lost considerable flesh, but has kept at work. Frequent night sweats, with symptoms of advancing pulmonary disease. Percussion dull at right summit front, with crackling at end of inspiration,

and long and loud expiration. More or less crepitus throughout right front. Respiration in left front exalted, wavy. Take pills of zinc and hyoscyamus at bed-time.

5th.—Night sweats much less.

No. 10.—Catharine W., aged 21; boot-fitter. Jan. 24th, 1856. Cough during past three months. Copious expectoration of thick, yellow matter; hectic; profuse night sweats. Percussion slightly less resonant at left summit than right, but not flat. Rude respiration, with prolonged expiration at summits front, most marked at left. Crepitus on full inspiration above spines of scapulæ. Cough mixture and pills of zinc and hyoscyamus, two each night.

31st—*No night sweats since taking pills.*

No. 11.—Ann G., aged 35; married. Feb. 25th, 1856. Cough of six weeks' standing. Cough dry, harassing. No record of auscultation. Severe night sweats for a fortnight past. R, Zinci oxid, gr. iv., ext. conii, gr. iij., in two pills at bed time.

28th.—Night sweats diminished.

March 4th.—Night sweats diminished, but have not entirely ceased.

No 12.—Thomas K., aged 50; gardner. March 21st, 1856. Cough of two years' standing. Rational signs of phthisis. Profuse night sweats Cavernous respiration, with gurgling at right summit front; crackling at left summit. Pills of zinc and hyoscyamus.

April 1st.—Night sweats diminished gradually from the time when he began to take the pills, and ceased entirely three nights since.

The night sweats were controlled subsequently by the use of the pills, whenever they existed to an uncomfortable degree. The patient found, however, that his dyspœna was increased whenever the night sweats were intirely checked.

No. 13.—Edward S., aged 7. April 25th, 1856. Cough for a year past. Free expectoration, particularly in the morning of thick, yellow matter; emaciation; weakness; irregular appetite; copious night sweats. Slight difference of key on percussion in upper third front in favor of right, but still considerable resonance over left. Respiration feeble in upper part of left lung, except when forced. In right back, respiration somewhat rough, particularly towards base, with a somewhat sonorous character to the expiration. No moist rales heard. The patient was ordered to take cod-liver oil, but no remedy was specially directed for the night sweats.

29th—Cough looser. Night sweats as before. Zinc and hyoscayamus pills, two at bed-time.

May 5th.—Sweats much less. Continue.

12th.—Night sweats have increased. Continue oil, and take vin. ferri, f z. i., tr. ferri mur., gtt. viij. ter die after meals.

21st.—The same. Nothing further known of the patient.

No. 14.—Margaret S., aged 32; wife. April 28th, 1856. Ailing for six months. Cough for the last three weeks, with some blood in the sputa each morning. Night sweats. No record of auscultation. Tonic infusion. Tr. ferri mur. gtt. xx. after each meal.

May 19th.—Cough as at first visit. Bloody expectoration twice since

visit. Night sweats as before. Substitute for iron drops pills of oxide of zinc and hyoscyamus, two each night.

29th.—Night sweats have ceased. The subsequent record shows that the sweats were always controlled by the pills.

No. 15.—Catharine L., aged 28; married. June 4th, 1856. Cough, &c., during past five months. Night sweats. Dullness on percussion at right summit before and behind, with bronchial, almost tracheal respiration in front, with more or less crackling in upper two thirds of right front. Resonance of voice beneath right clavicle. Cod-liver oil and zinc and hyoscyamus pills.

11th.—*No night sweats since.*

No. 16.—Emma M., aged 27; married. June 18th, 1856. General debility, following a profuse catamenial flow, with coagula, a fortnight since. Has worked very hard. No cough. R. Ferri ammonio-citrat., gr. v. Syr. limonis et aquæ aa f zardr. ss. ter die. At bed-time two zinc and hyoscyamus pills. Drink ale.

21st.—Stronger. Night sweats less. Her subsequent recovery was speedy.

No. 17.—Catharine H., aged 20; married. Sept. 12th, 1856. Cough, with slight expectoration during past three weeks. Has raised accasionally a little blood. Night sweats. Rather rude respiration beneath inner half of right clavicle, and also of the left, but not so marked. Fauces rather red, and uvula long. Resonance of voice beneath clavicles. Palliative for cough, and zinc pills, two each night.

26th.—No relief from night sweats.

No. 18.—Michael K., aged 22; plumber. Sept. 11th, 1856. Cough for three months past. Rational signs of phthisis. Night sweats. Family predisposition to phthisis. Flatness of right summit front and down to third rib, with cavernous respiration and large bubbling after cough. Respiration at left summit characterized by a *tardy expiration*, as if from a want of elasticity in the pulmonary vesicles, or an obstruction to the free exit of the air—a sign which I have noticed not infrequently. Percussion beneath left clavicle not fully resonant. Zinc and conium pills, two each night. Cod-liver oil and Bourbon whiskey.

18th.—Stronger. Night sweats less. Continue, and take three pills each night.

No. 19.—John B., aged 21; painter. Aug. 4th, 1856. Cough of seven months' standing. Emaciation; occasional night sweats. Pulse 99 after examination. Dull percussion above and on right clavicle, with deficient resonance below; throughout rest of right front, fair. Corresponding dulness of right back diminishing toward base. Crepitus after cough beneath right clavicle. Feeble respiration throughout right front, with considerable fine crepitus. Crepitus obscurely heard throughout right back, but respiration in right back generally pretty clear. Vocal resonance strong at right summit front. Cod-liver oil and palliatives for cough.

27th.—Expectoration much less, also night sweats. No chills as formerly.

Sept. 24th.—Symptoms much relieved until a week ago. Since that time

more profuse expectoration and night sweats. Continue. Alcohol amylici, gtt. vi. ter die. Zinc pills, two at bed-time.

29th.—Cough and night sweats less.

No. 20.—Michael D., aged 36; tailor. Jan. 27th, 1857. Slight cough more or less for three years. Expectoration slight, with occasional traces of blood. Anorexia. Bad taste and coated tongue. Bowels not moved for six days. Chills and night sweats. No marked physical signs of pulmonary disease. Cathartics, to be followed by tonics.

31st.—Night sweats less. Take two zinc pills at bed-time each night.

Feb. 3d.—As before. Increase zinci oxid. to gr. vi. each night.

4th.—No perspiration last night. Continue. Subsequent records confirmed the good effect of the zinc.

No. 21.—John McH., aged 25; laborer. Jan. 28th, 1857. Cough of two month's standing, and rather dry. Expectoration scanty, of thick, yellow matter. Emaciation; anorexia; general weakness, &c.; copious night sweats. Percussion, on, above and beneath right clavicle, less resonant than over corresponding part of left chest, but not absolutely flat. Respiration correspondingly feeble, also, at right summit behind. No rales. Take three zinc pills each night.

30th.—Sweats much less.

Feb. 2.—As before. Increase dose of zinci oxid., and substitute ext. gentian for hyoscyamus in pills.

No. 22.—Mary L., aged 32; widow. Jan. 29th, 1857. Night sweats for seven months past. Slight cough, without expectoration. No dyspnœa. No record of auscultation. Take zinci oxid., gr. iv., each night, in two pills.

31st.—No relief. Take three pills each night.

Feb. 3d.—Night sweats much diminished. Continue.

10th.—Out of pills for some days; since when, night sweats have returned. Continue.

18th —Sweats checked by pills.

No. 23.—Mary M., aged 22; domestic. Feb. 10th, 1857. Cough of a year's standing. Profuse expectoration, &c. Daily chills and night sweats. Percussion flat at right summit, with bronchial respiration and large mucous bubbles beneath right clavicle on forced inspiration after cough. Take Take two zinc pills each night, &c.

14th.—*No night sweats since.* Chills less. Continue.

No one can doubt, I think, on running his eye over the above cases, that the night sweats were checked by the oxide of zinc. In some instances they were immediately suspended after the first dose; in most, they were sensibly lessened, and there is hardly one in which two or three doses did not have the desired effect. It is probable that a larger dose would have acted earlier in the more tardy cases, if I had had much experience with the remedy, or the patients had given me the opportunity of prescribing a larger dose, by presenting themselves more frequently at the Hospital.

A Case proving that Menstruation is not only Ovulation, with or without a sanguineous discharge; but that it is, also, the periodical exfoliation of the mucous membrane of the body of the uterus. *By D. Warren Brickell, M. D.*

About six months ago, I was performing an autopsy in the dead house of the Charity Hospital. On an adjoining table lay the body of a stout young female who was said to have died of a disease of the heart. She had died a few hours previously, and was still quite warm. The thorax and abdomen were laid open. The body had been abandoned, and curiosity led me to examine the internal organs of generation. The uterus and appendages had been cut from the pelvis, and the anterior wall of the organ had been laid open. The parts had been thrown aside as possessing no especial interest. The moment I saw the organs I was struck with their being highly engorged with blood, and the uterus was considerably larger than usual. The pelvis was filled with blood which had flowed from the vessels when the organs were detached. The next thing that attracted my attention was the most palpable specimen of *recent* corpus luteum in one ovary. The corpus was large and prominent, and the depression on its centre, exhibiting the point of escape of the ovule, was evident beyond all cavil. In this same ovary one other Graafian vesicle seemed fully matured, the points surrounding it being highly congested, but the ovule had not escaped. The other ovary was generally congested, but there appeared to be no mature Graafian vesicle.

But the most interesting feature in the case was the *complete absence of the lining membrane of the cavity of the the body of the uterus.* The moment my eye alighted on the inner surface of the organ, I recognized the wood cut of Tyler Smith, in the May, 1856, number of the Lancet, (Amer. edition,) representing the inner surface of the uterus of a woman who died of apoplexy during the catamenial flow. Nothing could have been more striking than this resemblance; and if I had ever been skeptical in relation to the observations of the author, I was now bound to admit his accuracy. Down *to the os uteri internum* the mucous membrane was gone, and the inner surface of the organ rough, with innumerable blood spots scattered over it. All *below* the os internum was smooth, and in every respect natural in appearance. The difference in sensation conveyed to the finger by touching the two surfaces was as palpable as the impression conveyed to the eye.

The only doubt now remaining about the case was, whether it might not be an uterus which had very recently been delivered of an early ovum. More extended examination, however, proved clearly that this was not the case. The vagina was very small, and its mucous membrane highly enrrugated; and there was a well defined hymen. To add to this the mammæ showed none of the changes generally produced by early pregnancy.

The subject was, to all appearance, about eighteen or twenty years of age, and quite robust. She was the subject of anasarca to a considerable extent, and was said to have died very suddenly—her death being attributed to disease of the heart. I tried to get a more accurate history of her from the

nurse of the ward in which she died; but, as is too often the case, she only knew that such a woman had been in the ward, had lived, and then had died.

Tyler Smith says, "According to my view, the mucous membrane of the uterus becomes excrementitious every month, and is discharged from the cavity of the uterus in a state of disintegration, and the uterus forms a new mucous coat, by a process similar to the reproduction of lost parts." Coste and others speak of the exfoliation of the mucous membrane of the uterine cavity under certain circumstances; but, so far as I am aware, Tyler Smith is the original advocate of the theory above laid down. After reading all the observations I could procure on this interesting subject, I was altogether inclined to adopt this theory, and the case I have thus described, only the more strongly tends to prove its correctness.—*N. O. Med. News and Hosp. Gazette.*

Retained Placenta.

Dr. Putnam, speaking of retained placenta, (Boston Society for Medical Observation,) thought that bleeding was a much more prominent symptom than pain. He had recently succeeded in removing, by means of ergot, a placenta which had been retained for two months. Generally speaking, it is very difficult to effect the removal by means of forceps, unless the placenta is very near the os uteri, and when in this locality it will sometimes melt away.

Dr. E. H. Clarke thought it much better, in the management of cases of this nature, to employ ergot, or plugging the vagina, rather than traction. He reported a case, where a woman aborted at three months'. term. The fœtus came away, leaving behind it the placenta and membranes. No flowing ensued, and no result was obtained from the use of ergot. He ordered perfect rest, and to be sent for if there was any hemorrhage. The next day the patient took the cars, and went forty miles into the country, where she made a visit of ten days' duration, walking and riding about; she then returned to the city. A fortnight after abortion, Dr. C. was suddenly summoned to the patient, whom he found flooding so excessively that her sight was gone, and her life in imminent danger. He immediately plugged the vagina; and, at the end of forty-eight hours, on withdrawing the plug, the placenta followed it. The woman recovered. In this case there was no pain, from the delivery of the fœtus to the commencement of the hemorrhage. Ergot was administered, both in powder and in the form of the saturated tincture; it was not persevered in because of its non-retention by the stomach.

Dr. Herrick related a case where he was called to a young woman, six months advanced in pregnancy; she had a slight uterine hemorrhage. He put her on her back and administered morphia. Six hours afterwards, at a second visit, she was sleeping quietly; in the course of the night she miscarried, but remained quiet until next day, when a severe flooding commenced. Dr. H., on being called, found the os contracted on the placenta.

He immediately plugged the vagina, and allowed it to remain undisturbed for twenty-four hours. On removing the plug, at the expiration of this time, the placenta was in the vagina. There was no further trouble.

Dr. Alley mentioned a case similar to the one reported by Dr. Clarke; by the end of the third day all the secundines were thrown off together, under the influence of ergot.

Dr. Buckingham spoke of the management of retained placenta, and referring to the use of ergot, he called attention to the work of Murphy on Obstetrics, approving of the distinction, drawn by him, of the two classes of cases in which ergot should be given or not. In full-blooded and strong patients it induces muscular contractions. Where feebleness and bleeding exist, it is apt to produce a depression of the heart's action. From this effect, many always combine camphor with it. Murphy advises the previous administration of opium, but as opium itself has similar effects, it should be employed with great care. Dr. Buckingham asked Dr. Putnam his opinion as to the safety of plugging the vagina in a miscarriage at five or six months' period, with placental retention.

Dr. Putnam thought that there was no danger; he looked upon it as the best practice, and in twenty-four to forty-eight hours the placenta will be expelled. He had even known of plugging at full term, when there was severe hemorrhage, with great benefit. Dr. P. commonly employs a sponge for this purpose, which has previously been soaked in a solution of alum, which has the double advantage of making a firmer clot and preventing annoyance from the decomposition of the fluids.

Dr. J. P. Reynolds approved of the India rubber vaginal plug. This consists of two thin sacs, each of which is provided with a slender tube about eight inches long, on the end of which is a metallic coupling with a stopcock. One of the sacs is introduced into the vagina, and distended to any required size by means of air, or fluids, as preferred, driven through the connected tubes from the other sac by the pressure of the operator's hand.

Dr. Buckingham thought the chief objection was found when it is wished to remove a part of the plug only, so as to manipulate with instruments.

Dr. Ellis had seen in Vienna a somewhat similar plug used, the difference being that the connecting tubes of the sacs were metallic instead of India rubber, and thought that it was better on this account; by means of the inflexible tube the plug could be better retained in place, when expulsive efforts of the vagina exist.—*Boston Med. and Surg. Journal.*

Creosote in Dysentery.

In a very wide spread epidemic, Dr. Andree found the aqua creosoti of the Swedish Pharmacopœia (1 gr., ad 15 pwt. aq. dist.) very useful. A teaspoonful is given to adults every two hours, and a drop (for every year) to children. It is useful only at an early stage, opium being the remedy at a later. Dr. Hellmann has also found it useful; but some practitioners state that those patients who take the aqua as a prophylactic of their own accord, are oftenest seized with dysentery.—*Schmit Jahrb.*

ALKALINE METHOD OF TREATMENT IN ACUTE RHEUMATISM. *By James Graham, M. D., Professor of Materia Medica and Therapeutics, in the Medical College of Ohio.*

Dr. John H. Griscom, one of the Physicians to the New York Hospital, has recently presented to the profession the results of his experience in the treatment of acute rheumatism by the alkaline method, and these results correspond so closely with my own at the City Infirmary, during my late connection with that institution, that I venture to offer a few general remarks on the subject.

Dr. Griscom's statistics comprise twenty-six cases, and the average time that his patients were under treatment was about thirteen days; the duration of the whole attack averaging about twenty-one days. Dr. G. asserts, that under the most improved plans of treatment heretofore pursued, the average duration of treatment has been about six weeks. There is one point to which this physician particularly alludes, in which his experience is strongly corroborated by my own, viz., the freedom from cardiac and other complications which attended the alkaline treatment. In not a single instance did such complication manifest itself after the patient's admission into the Hospital, and the testimony of the other physicians of the Institution establishes the same fortunate exemption.

I was first led to try the alkaline method by the perusal of Dr. Henry William Fuller's most excellent work on rheumatism. Dr. Fuller, as many are aware, maintains that in acute rheumatism the blood is contaminated by a poison "which is at once the source and maintenance of the mischief;" and he further asserts (p. 73) that this *materies morbi* is an acid, or an acidulous compound, which can be eliminated only by a free exhibition of alkalies and neutral salts. He admits, however, that purgatives, sudorifics and diuretics, by promoting the various excretions, may assist in accomplishing the object, yes alkalies are essential to prevent the further formation, and to effect the elimination of the morbific element. The remedy preferred by Dr. F. is the potassio tartrate of soda, which is readily decomposed in the stomach, aets quite as energetically, and is much better tolerated than corresponding quantities of the alkaline corbonates. Dr. F. made some experiments to determine the efficacy of impregnating the joints affected with alkaline matter, and though these were not sufficiently extended to enable him to form a positive opinion, yet, on the whole "they proved extremely satisfactory. The most serious complication of acute rheumatism, it is needless to add, is heart disease. The frequency with which this occurs, may be inferred from the statistics collected by Dr. Fuller, during the period he held the offlce of Medical Registrar at St. George's Hospital, London, viz., from the 1st of January, 1845, to the 1st of May, 1848. Of 379 cases observed by him, embracing all the examples of acute and subacute rheumatism admitted, the heart was healthy in 160 cases, in 32 *probably* healthy, while in 187 it was temporarily or permanently deranged to a greater or less extent. These statistics certainly present a most formidable aspect, as some form of disease existed in about half the cases. Now, to preserve the

heart from mischief, according to Dr. Fuller, it is not only necessary to take precautions against inflammation, but to maintain the solubility of the fibrin of the blood, and for this purpose, I am satisfied we must rely on the free administration of alkalies and the neutral salts--the experience of Dr. Fuller, Dr. Griscom, as well as my own, having satisfactorily shown that they surpass all other agents in preventing fibrinous deposits on the valves. Dr. Griscom administered the sup. tart. pot. et soda in drachm doses every hour, and ordered an anodyne lotion of carb. potas. and tinct. opii to be applied to the joints affected. Alteratves and evacuants preceded the employment of these remedies, according to the indications presented. The severity of the symptoms was found to diminish as the urine became less acid.

I am aware that Dr. Roderick Macleod, who, at the time of the publication of his work on rheumatism (1842), was also physician to St. George's Hospital, has given the results of his experience in the treatment of rheumatism, based on 400 casses attended by him in his public capacity, and that he claims in favor of the bloodletting and purging treatment the average duration attained by Dr. Fuller, Griscom, or myself. For example, of 266 cases, 148 were discharged cured within a month, 110 within a fortnight, and 60 within eight days. Dr. Hope asserted, that under a similar method of treatment, in his practice, the cases were exceptional which were not cured within a week. Dr. Corrigan, with large and repeated doses of opium, has cured cases in nine days. Bouillaud, by copious and repeated abstraction of blood, required from one to two weeks for the same purpose, and yet, if report be true, he lost six out of eighteen patients from cardiac disease.

But I have extended my remarks beyond the limits which I proposed. My only object, in offering a few observations on the alkaline method of treatment, is to bear my humble testimony in its favor, fully believing, as I do, that it is capable of effecting a more speedy and perfect cure than any other plan that has ever been adopted. To those who are skeptical on the subject I would recommend the study of the facts collected in Dr. Fuller's treatise. In this a comparative view may be taken, which, in my opinion, must satisfy every unprejudiced mind. It will there be found, that the boasted success of the authors whom we have mentioned, admits of considerable qualification, and is in reality less than has been asserted.— *Western Lancet.*

Best Treatment of Varicose Ulcers and Varicose Veins.

The treatment of varicose veins is a practical every-day subject, inferior to none in interest for the hospital surgeon. Indeed, allied as this affection is, externally, to questions of practical surgery on the one hand, and depending for its causes on relations of the general venous system and general internal health on the other, a wide field of speculation is afforded as to treatment. In hospital practice, accordingly, as the practitioner may be more of a physiologist and anatomist, or more or less influenced by the ordinary routine of simple surgical treatment, ligature of veins, constitutional treatment, or

means of blocking up these vessels, will be trusted to, previous to healing the varicose ulcer. A good deal of danger of ligature of veins is found to originate in the fact that the vein is enlarged; and the ligature, when it should go deeper than the vein, will be found to have wounded or transfixed the vein and caused phlebitis.

Mr. Paget's experience every year assures him more and more of the superior value of the treatment of varicose veins by the caustic issue, or the extemporized mixture of lime and potash. There is no mode of treatment yet discovered, according to Mr. Paget, which is entirely free from risk, but from pretty extensive inquiries in the hospital practice of such surgeons as Sir B. Brodie, Mr. Lawrence, Mr. Skey, various hospital surgeons in the provinces, and in France and Germany, etc., Mr. Paget is inclined to the impression that the treatment of varicose ulcers and varicose veins is most safely and most effectually conducted by means of local applications of caustic issues on the surface, which thicken the coats of the venous trunk.

A very well-marked case of varicose ulcer of the leg, and leg and foot, which incapacitated the poor young man from employment and deprived his family of support, has been for some weeks in St. Bartholomew's, as well as a second case, where the varicose vessel gave way, but has again healed up. The former case is that of A. D———, a young and apparently otherwise active and healthy man, aged 28. He has been all the present month, (September) under treatment for a varicose condition of the veins of the lower extremity: his disease consists rather of a very troublesome ulcerated condition of the ankle and foot, which he cannot himself conceive to be dependent on the state of the veins. The history he gives of the case is not very defined, or is but a recapitulation of a set of abortive attempts to cure his ankle by ointments, lotions, salves, etc., each in its turn recommended to him as the most specific thing in the world for an inward disorder of the constitution, but still only making the disease worse.

The form of caustic used by Mr. Paget consisted of pottassa fussa dm ii, quick-lime grii, separately in powders in small phials, and subsequently mixed with a glass or asbestos rod at the bedside, with spirits of wine, when used. A dozen or two of small pieces of common adhesive plaster are next obtained, each the size of a penny, a small circular hole being cut in each, of the size of a pea, or a silver threepence. One of these perforated pieces of plaster is placed over each projection or varicose enlargement of the vein, a very small quantity of the caustic paste is next applied with a bone spatula to the skin over the vein, in the circular hole left in the plaster; ten to twelve or fifteen minutes will be sufficient time for the issue to produce its effect, at the expiration of which period, the whole limb is carfully sponged with warm water, and all the plasters and caustic washed away. Little else was necessary in this case, as in the general class of these cases, the issue merely requiring simple dressing, while the ulcers in the ankle went on healing *pari passu*.

As a local aplication to the ulcer during the action on the varicose vein of the issue, any simple ointment or black wash is all that is required.—*Association Medical Journal, Sept.* 27, 1856.

Does Ergot, when administered during Labor, injure the Fœtus?

Dr. R. U. West has, in the Medical Times and Gazette, tabulated sixty-nine cases of labor, in which ergot of rye was administered. The following are a portion of his remarks in relation to this question:

With reference to the probability of the ergot causing the death of the fœtus, I may observe that, in the whole number of 69 cases, there were 9 stillbirths, viz., in cases 2, 5, 16, 19, 23, 33, 39, 56, 67. All the other children were born more or less lively and vigorous. Of case 25, where the fœtus survived its birth only half an hour, I ought to observe that the mother usually gave birth to stillborn or similarly feeble children. Certainly, her three previous children were in this condition, no ergot having been given. From this list of 9 stillbirths, we may at once exclude cases 19 and 33, the putridity of the fœtuses in these two cases having proved that they had died some days before the commencement of labor. Cases 5 and 39 were attended with considerable hemorrhage during or immediately preceeding the labor, a circumstance of itself quite sufficient to account for the death of the children. In case 67 the death of the child was undoubtedly caused by pressure on the funis, during the difficult delivery of a hydrocephalic head in a case of feet presentation. Four stillbirths remain to be explained, viz., in cases 2, 16, 23 and 56. Do the cases just referred to, when compared with the large number in which, under all sorts of unfavorable circumstances, and with a duration of the labor process, under the influence of the ergot, varying from a quarter of an hour to three and four hours, the fœtus was born lively and vigorous, prove anything whatever against the ergot of rye? I certainly think not.—*N. Y. Journal of Med.*

Sterility Remedied.

A correspondent of the New Orleans News and Hospital Gazette, directed a negro woman to apply an infant to her breast with a view to cure her of sterility. The prescription was followed for only four successive days, during which time she conceived, and at the end of full term was delivered of a fine child. This is another evidence of the remedial use to be made of the close sympathy existing between the mammæ and the uterus and ovaries. Wishing to avail ourselves of this means for the relief of amenorrhœa, lately, we used the gum elastic cup as very convenient of application, and with good effect. This was done after sinapisms had failed.—*Memphis Med. Recorder.*

Treatment of Boils.

Dr. Winslow, in the Boston Journal, gives his practice in the treatment of boils. Many cases occur in which, one after another of these troublesome and painful eruptions came out, and the usual prescription—salts or sarsaparila. Dr. W. says that his practice is *to bleed, and give no medicine.*

Cure of Itch in half an hour by Sulphur in the Liquid Form.—By Dr. Edward Smith.

[Dr. E. Smith here draws attention to an article by Dr. Bourguignon in confirmation of the value of sulphur, combined with lime, in a liquid form, in the treatment of itch.]

The remedy is prepared by boiling one part of quick-lime with two parts of sublimed sulphur, in ten parts of water, until the two former are perfectly united. During the boiling it must be constantly stirred with a piece of wood, and, when the sulphur and lime have combined, the fluid is to be decanted and kept in a well stopped bottle. A pint of the liquid is sufficient for the curé of several cases. It is sufficient to wash the body well with warm water, and then to rub the liquid into the skin for half an hour. As the fluid evaporates, a layer of sulphur is left upon the skin. During the half hour the acarus is killed, and the patient is cured. It is only needful then to wash the body well and to use clean clothes. In Belgium the treatment is introduced by first rubbing the body for half an hour with black soap; but this does not appear to be necessary. The only essential act is that of the careful application of the fluid sulphur. The lime is of no importance in the treatment except to render the sulphur soluable, and such would proably be the case if potassa or soda were employed. The chief point in the plan thus employed, which is an improvement upon the mode of aplication of sulphur in substance with lard, is the more ready absorption of the remedy, and consequently the more certain and quick destruction of the insect, by using sulphur in a liquid form. In so disgusting a disease, it must be of great moment to be able to cure it in half an hour. —*Association Med. Journal, March* 8, 1856, *p.* 195.

The Vapor of Amylene.

This is the name for a new anæsthetic. It is said to produce insensibility more surely and completely than chloroform, and to leave no bad effect. There follows its administration no sickness nor vomiting. It has been fairly tested in King's College Hospital, London. Amylene is a carburetted hydrogen, C_{10} H_{10}, and is prepared by acting on amylic or *fusel* alcohol with an excess of concentrated sulphuric acid, and then heating the two to boiling; and also by distilling fusil oil with chloride of zinc. It is colorless—the density of its vapor being 2. 45, and possesses an agreeable odor —*Southern Journal of the Medical and Physical Science.*

Ointment of Iodide of Potash.

Ointment of Iodide of Potash may be prevented from changing to a brown color, by adding to the lard or to the ointment a few drops of potash lye. This, on the contrary, renders the ointment white and frothy—owing to the saponification which takes place on rubbing the ingredients together. So says the *Chemical Gazette*, of New York.

EDITORIAL AND MISCELLANY.

CLINICAL INSTRUCTION IN THE MICHIGAN UNIVESLITY.

The majority of our readers have an interest in the Medical Department of our State University, sufficient, at least, to cherish the hope that its success and prosperity shall fulfill the designs of government, and render it worthy of its munificent endowment; for whatever may be its history, it involves alike the political economy of the State and the honor of the medical profession. Its past history has demonstrated the practicability of the original design of government, in its establishment, and afforded ample protection against the subversive attempts of empiricism, made through political intrigue and legislative enactments. But while it has been in a great measure successful in its practical working, has it taken that rank among the medical schools of this country, which its financial resources and the patronage of a State government, ought ere this to have secured? At the present day no medical school is worthy of being considered among the first, without *affording superior advantages from clinical and hospital teaching*, and the resources for such advantages can only be made available in the populous cities. It follows, therefore, that although the Medical Department of the *Michigan University* may be pleasantly situated in the beautiful rural village of Ann Arbor, and even offer gratuitous instruction, yet while it is thus located, it can never become any thing more than a respectable country school.

A little more than six months have now elapsed since we first presented our views of the importance and necessity of a removal of the *Medical Department* to this city, where it may possess clinical and hospital advantages, such as would place it at once upon a basis of successful competition with other schools, and furnish to the medical student that kind of practical instruction which is the *sine qua non* in a preparation for the practice of medicine. In doing what we have toward the accomplishment of this object, we presume that we have incurred the displeasure of a few Ann Arbor landholders, editors, and perhaps even the Chancellor of the University, to say nothing of the vials of wrath which have been poured out of the "*Peninsular Jour-*

nal," charging us with "*assailing*" the State University without substantiating the charge. But notwithstanding all this, it was soon observed that the majority of the Medical Faculty were not only convinced of the absolute necessity of increased facilities for affording practical teaching, but were anxious that the department should be removed as soon as practicable. Why then was not a plan matured by which it should be speedily accomplished? The Board of Regents acknowledging the utility and necessity of increasing the advantages of the school, have offered a compromise—to that spirit of progress, which would labor to promote and perfect the Medical Department—by instituting a summer course of "*Clinical Instruction,*" at St. Mary's Hospital, in this city. Let us see how much of practical wisdom and good policy has been displayed in the plan proposed, as indicated in the official announcement which appeared in the April number of the "*Peninsular Journal,*" as follows:

SCHOOL OF CLINICAL INSTRUCTION, APPURTENANT TO THE UNIVERSITY OF MICHIGAN, IN DETROIT.—Our readers will learn by the following extract, from the records of the Board of Regents, that this important want of the medical neophyte is about to be supplied.

(EXTRACT.)

Resolved, That Z. Pitcher, M. D., Em. Prof. of the Institutes of Medicine and Obstetrics in the University of Michigan, be and he is hereby appointed Clinical Instructor, to commence and perfect as far as practicable a course of clinical instruction for the students of the Medical Department of the University, in accorcance with the views expressed in his letter of March 5th, 1857, addressed to the Chairman of the Committee on Clinical Instruction."

The necessity of giving daily attention to my private engagements will prevent my devoting to the duties of this appointment, all the time that its importance demands. I shall therefore associate with myself in the discharge of these duties, Professor A. B. Palmer, of the University, from whose zeal and recognized ability I expect to derive important assistance.

No student will be admitted to the privileges of this course of instruction who is not a matriculant of the University, and who has not the preliminary education required of candidates for the degree of M. D., and has not attended one full course of lectures in the Medical Department of Ann Arbor.

Preference will be given to those students who have attended two courses of lectures, the analytical course of Chemistry, under the direction of Professor Douglass, included.

The authorities in charge of the St. Mary's House for invalids in Detroit have consented to the opening of that institution to the students of the Medical Department of the University, under the direction of a clinical instructor. This house contains about one hundred beds, and furnishes facilities for studying practically most of the usual varieties of disease, incident to this climate.

In the course of the summer, the Marine Hospital will also be opened to them, where they can see the diseases and assist in the treatment of injuries peculiar to seamen.

The time for commencing this course, not being designated by the Regents, in the exercise of a discretion assumed to be conferred, I have thought best to appoint the 15th of June for that purpose, reserving the right, unless

overruled by the proper authority to vary the time hereafter, if that date should be found to prejudice the operations of this, or any other sub-department of the University.

Z. PITCHER.

DETROIT, March 28, 1857.

Here, then, is the Medical Department of the Michigan University, "revised and improved" by the Board of Regents. To us it looks very much like "the play of Hamlet," with "*Hamlet*" left out, and before the last *rendering* is complete we venture to predict that it will be more appropriately named *the Regents folly*—in one act!

But who are to represent the most practical department in this clinical teaching? Why are the "Professor of Theory and Practice," and the "Professor of Surgery," left out of the programme? Both are residents of the city, and both are zealous and competent teachers. Why are these departments represented by an *emeritus* professor, *assisted* by the Professor of Materia Medica? This is the way by which the Board of Regents propose to supply this "*important want* of the medical neophyte;" a professor in the institution is to be permitted to discharge his duties *by proxy*. May not the Professor of Surgery or Theory and Practice, with as much propriety associate with himself some *proxy*, from whose zeal and ability he can derive important aid in giving his winter course at Ann Arbor?

If such are the only inducements offered by this "appurtenance" to the University, is it reasonable to suppose that in addition to the six months of laborious study through the *winter course*, they will come here, into the city, during *the heat of summer*, to complete the curriculum?

Can the Medical Department of the *Michigan University*, with such comparatively meagre clinical advantages, hope to compete successfully with schools wherein the *theoretical is associated and blended with the practical?* The great utility of clinical instruction consists chiefly in the fact, that it is *made to illustrate principles*, to familiarize the student with the physiognomy, or sensible aspects of disease, as well as its pathology, and the modus operandi of remedies.

A few years since Branches of the University were established in different parts of the State, the constant nursing of which crippled the University fund, and involved the institution in financial embarrassment. We have reason to fear that this last experiment—this *Branch of the Medical department*—has been established upon the same short-sighted policy, the same want of practical knowledge and appreciation of the real object to be accomplished.

There is one feature in the announcement of this summer arrangement which may surprise some of our readers, and though we may incur the risk of being considered invidious, its import gives additional

strength to our views respecting this—at best—doubtful experiment of the Regents, and therefore it merits a passing notice. It is very well known that the *emeritus* Professor who has received the appointment of "clinical instructor," has held *peculiar* views respecting *the utility* of hospital advantages; taking the ground that "*clinical observations* may be *most* successfully and profitably made *under the supervision and direction of a private preceptor*," and that "a *thorough* knowledge of the principles and elements of the science of medicine *should precede any attempt* at their practical application."

Now he speaks of these proffered advantages at St. Mary's hospital, as an "*important want* of the medical neophyte."

What has so completely metamorphosed his published opinions on this subject?

Why the Board of Regents should have chosen a man who has long entertained and published opinions entirely apposed to hospital instruction, is a question which time will answer.

R.

SPECIALTIES AND SPECIALISTS.

BY W. H. BYFORD, M. D., EVANSVILLE, INDIANA.

Specialty in medicine has reference to practice, in some praticular disease, or the diseases of some organs, or class of organs. Obstetrics or surgery either alone can not be considered a specialty, as the profession generally understands the term, because each embraces too extensive a range of subjects. Perhaps obstetrics would come the nearer. Diseases of the chest, eye, ear, in practice, and orthopœay in surgery, may be considered specialties, with propriety. A specialist is one who practices a specialty. There are two sorts of specialists, as there are of general practitioners, viz: scientific and quack. The scientific physician who is thoroughly educated in the profession and from preference, accident or aptitude, devotes his attention to more particular subjects in medicine or surgery, and uses no improper or dishonorable means to procure business, is engaged in a proper and laudable pursuit, and while he is benefiting himself and the community in which he practices, may do as good service in advancing the honor and interests of the profession—probably more—than one of the same capacity and acquirements whose attention is diffused over the whole expanse of our vast science. This sort of specialist, is one of our common fraternity, and his acquirements are amenable to every honorable professional requisition. He should be encouraged. The quack specialist is simply a pretender, an impostor, and abomination in the eyes of every honorable man, in and out of the profession.

After all the discussion I have seen in the journals on the subject of specialties, I think there is not so much objection to them as to the

character of the specialist. The fact that quacks try and actually pass off their imposture better in specialities than in general practice, would seem in some measure to justify the too sweeping denunciations against these particularities. Thesuccess too, which quack specialists sometimes meet with, may have the effect of seducing well informed, but sordid men of science, from the sphere of professional propriety. But while great evils result as things now stand, from the pretenders in specialities, great good may and ought to come from the cultivation by scientific men of knowledge of some particular subject connected with our profession. Why is it that dishonest pretenders succeed better in specialities than in general practice? The greatest field for imposture, certainly in the West, and I presume among other parts of the country, is in diseases of the eye, and hence it may be well to look at the causes of their success in the diseases of this organ. I do not mean by success their excellence in cures, but in getting employment and money.. "Eye doctors" itinerant and local are common among us all over the West, and it is a shame upon the intelligence of the people to say, but it is true, that they cheat their patients out of more than the man of science earns by his honest toil. Another question by way of answering the first, which I know everybody who does me the honor to peruse my communication, can answer as well as I can. Is there not great deficiency of correct practical information on diseases of the eye all over the West in the profession. Now I suppose this to be answered in the negative. Then it is an evil we can not correct perhaps at all, it is beyond our reach until the people are educated to know their interest better, and this probably experience alone will do. If, however, the question is answered in the affirmative, then the profession to a certain extent is responsible for it, and may apply the remedy. And in this connection I will ask every graduate how much time was you required to study diseases of the eye in the lecture-room, or in any way at college. How many lectures did you have, and how long were they on the anatomy, physiology and pathology of the eye? How many questions were you asked about the important diseases of that complex and delicate organ? Ten per cent., five per cent., or even one per cent of the whole of these interesting exercises? If you are a practitioner I would like to know what pro portion the teaching bears to the requisitions of your practice in this respect? By the time these questions are all answered, I think we may have an inkling of a part of the causes at least, of the prevalence of quackery in this specialty. Still looking at the question as answered in the affirmative, I would remark, that when all of the profession are educated up to the times, on every subject connected with our noble calling, there will be no room for imposture. Exposure and discomfiture would almost, if not quite, immediately follow the attempt to practice upon the community. We may trace back the evil I think to the fountain head—our colleges and educators. And here I desire it to be understood that I do not blame our professors with the present state of things, but members of the profession generally, for not requiring a correction of the evil. As colleges are organized, each professor has more work than he can do *well.* Let there be more

chairs, embracing among them any portion of our science, that is of sufficient importance to require a thorough knowledge of it, for success in practice and the credit and improvent of the profession, and demand a thorough acquaintance with all the different subjects taught, as a condition of graduation. If disease of the eye, ear, or any other organ, constitutes one tenth of a man's practice, how uncomfortable he must feel, how unprofitable to his patients and discreditable to the profession he must be, if. deficient in this respect. It is all very well to teach general principles. They are indispensable to the intelligent explanation of the *modus operandi* of medicines and disease, but young men must learn to apply them in detail, and this they cannot do unless our profession is taught in all its minutiæ, and they *will* not, unless their professional parchment license, as well as their success in practice depend on it. Such teaching and requirements would, so far as practicable, do away with the demand for specialists, and effectually put a stop to the mass of quack specialists. Now the specialties are a fruitful field from which pretenders reap their richest harvests, and inflict the severest injuries upon the honor and interests of the profession. They would also remove the temptation to scientific physicians who might pursue any of them to overstep the bonds of professional propriety. They would be held in wholesome check by the general information of the profession, embracing an intelligent understanding of any subject they might select, and they would be required to attain a higher degree of professional knowledge before they could be entitled to preference in any branch. In this manner they would unquestionably be, as some now are, an honor to the profession, and a blessing to their kind. I hold that all members of the profession, individually and collectively, are alike responsible for the educational deficiencies in the profession, and must move for educational reform together, that the journals and their associations are the mediums through which their influence should be felt in the proper places. Much good has already been done, and is now going forward in the broad current of literature which is flowing through them all over the land, but more is yet to be accomplished.

As my paper, Messrs. Editors, has already grown to larger dimensions than I anticipated in the commencement, I will conclude by expressing the hope, that these suggestions may elicit the services of able pens, and more influential members of the profession, in what I consider an interesting and important subject.

Editorial Comment.

The perusal of the above article has afforded us more than ordinary pleasure. Dr. Byford has touched a key, which we think, will call forth a vibration of approval, in the mind of every reflecting and hon est practitioner. In medicine, as in every other department of human research, whether in science, technically so called; in ethics or theology, it is profitable to pause, at intervals, and contemplate the actual progress attained—the real improvement acquired. So, too, in the arts, as well as in business,—in any and all the events of industrial pursuit.

While the entire article is entitled to the serious consideration of all who value science and desire the triumphant success of legitimate medicine, certain portions of it merit more than a mere transient thought. The author speaks emphatically, of the present mode of teaching our science, in the colleges and schools; of the paucity of professorships, in most, if not all; of the excess of labor, heaped upon professors respectively, in order to comparative thoroughness, and the remissness of the profession at large, in not demanding the correction of existing and glaring defects,—in not claiming *positive, practical reform.* He goes further and suggests a plan, which we concede is both plausible and practicable, and if carried into efficient, working operation, would doubtless accomplish much towards the desired object. But is the proposed plan sufficient, of itself, to work the good results, with the necessity of which Dr. B. is so fully impressed, and which he so ardently and properly desires? We confess we cannot think so. To the following postulate we grant our fullest assent: "I hold that all members of the profession, individually and collectively, are alike responsible for the educational deficiencies in the profession, and must move for educational reform, together; that the journals and their associations are the mediums through which their influence should be felt in the proper places." But is this all that the crisis demands. Are not other influences and other modes necessary also? What, for example, would be the effect of a demand, emphatically spoken, on the part of the *people*, for a higher standard of qualifications in those to whose care they confide the weightiest responsibilities; their most sacred affections and regards? If it were possible to reach their judgments, and, thereby, so change their predilections, that in choosing a family physician, they should select a man of acknowledged attainments, instead of a stage driver or an ostler, we ask if the desired reform, in professional education, would not follow, as rapidly as time would allow? Would it not come from such a reformation in public opinion and public practice as surely as an effect follows its appropriate cause?

And is it impracticable to reach public opinion, and therefore practice on a subject conceded to be of such weighty consequence? But we do not propose to dwell longer on this point. We said other influences and other modes, also. A few words in reference to modes, other than those dwelt upon, somewhat at length, by Dr. B. And, first, of the usage of colleges and schools, in regard to students and the granting of diplomas. Now, nothing is more common than to be told by the individual who has chosen to submit his life, and that of his family, to the omniscient keeping of the homœopath or hydropath, that "Dr. — was regularly educated a physician"—the conclusion obviously exist-

ing in the mind of the speaker, that the fact enunciated involves a special merit. Without attempting to show the fallacy of such conclusion, we regret to be obliged to admit that, in too many examples, the alegation is true,—that men, who have pursued a regular course, so far as to have obtained the honors of a legitimate institution, and not unfrequently, having pursued rational practice, for a time, greater or less, seized by some fantasy, or having been Judases, abinitio, have abandoned the "straight and narrow path that leads" to true honor, and "given themselves over to believe a lie," and to practice deception. Nor is it our purpose to dwell on this forbidding feature of the subject. What we would learn is, whether the legally organized institutions have it in their power to put a stop to, or to interpose a check to such traitorous proceedings. We have thought it not only in their power, but their imperative duty to make an honest, and an earnest effort. But how is an object so desirable, to be accomplished? We are not unaware that it is most difficult so to construct statutes and by-laws as to provide against the devices and ingenuity of the sordid and the dishonest. Some of the schools have adopted the following and, as far as we are informed as to the working operation of the measure, with quite satisfactory resuits. It carries plausibility on its face, and we have but little doubt if incorporated into the statutes of all the medical institutions of the country, it would impart a powerful impulse towards progress and reform.

It is to the effect that each graduate, prior to the receipt of his diploma, is required to execute a pledge, that he will, faithfully and honestly adhere to the principles of medical science, as taught in the halls of the institution, that he will do all in his power to promote the interests and success of legitimate medicine; and further, if he diverge from the conditions of the pledge, by vicious or immoral conduct or by adopting any of the irregular systems of the day, or otherwise, the authority granting such diploma, shall have power to revoke and annul it. Would it not be profitable, also, to require of students, at the time of matriculating, to execute an agreement or other article, setting forth their intention, faithfully and without reserve, to pursue, adhere to, and seek, by all laudable means, at their command, to advance the interests of regular, scientific medicine, and to allow no others to matriculate? With these articles incorporated as already suggested, and consistently adhered to by corporate bodies and faculties, it would seem that one avenue, at least, would be closed to a species of charlatanism, that puts on, to some extent, the livery of science, and therefore, of respectability. We do not undertake to say that these innovations upon the general mode of managing such matters afford the best possible sources of hope in the premises. We

have offered them, however, as among the practical measures which merit trial. But this is not all. We would not overlook efficient clinical instruction, as among the most available means, if not the sole means, which can be made efficiently operative,—(so far as the profession in the abstract is concerned)—of correcting the evils contemplated in Dr. B.'s paper. That a higher standard of qualification in the medical fraternity would, ultimately, command a greatly exalted appreciation of scientific medicine, and by consequence of its votaries, would seem to accord with the common principles, by which the mind is governed in the exercise of its predilections and volitions. And what more feasible procedure can be conceived for the attainment of this desirable grade of qualification, than that of associating *clinical* teaching on a commensurate scale, with each school of medicine, throughout the length and breadth of the land.

But, that it may be efficient, practically so, and therefore, productive of a fair proportion of the advantages of which it is capable, hospital facilities are indispensable. Nor is a corps of competent teachers, less indispensable. Teachers, qualified, not merely by the possession of a diploma, and a given amount of reading, but who have stood at the bed-side of the sick, who have thus practically studied disease, and are capable from actual experience, of interpreting accurately, its several phenomena, deducing the appropriate indications of cure and applying the remedial measures which science has furnished, to the best advantage. But there is another feature of the present system touching the qualifications of the medical practitioner, which deserves a passing remark. It has reference to the period of study requisite to an examination and admission to practice. We take it none will question that much more time than three years is necessary for the most intellectual, even, to master and make his own the great and complex principles of our science.

Would not an extension, then, of the reading term to four or five years accord with the views of Dr. B. as a further means of correcting existing evils, and promoting professional progress? We confess we have long been of the opinion, that change in this direction is of the first consequence. We have hoped too, that among the first objects to which our National Medical Association, now in session at Nashville, Tennessee, would direct its earnest attention, would be modifications and improvements in the present system of medical teaching. Let, then, *clinical instruction* and *hospital facilities*, commensurate with the objects sought, constitute a fundamental department of every medical institution, and let faithful attendance thereon be made a *sine qua non* to an examination, and the granting of a diploma; and, moreover, let the term of study be extended, as above suggested, and we would earnestly hope the impositions, most justly complained of in Dr. Byford's well timed paper, would, at a period not far distant, be among the rubbish and debris of by-gone ages.

K.

Facts from Draper's Physiology.

Man is fed with more than a ton weight of material in a year, and in the same time wastes more than a ton away.

From the army and navy diet scales of France and England, which of course are based upon the recognized necessities of large numbers of men in active life, it is inferred that about two and a quarter pounds avordupois of dry food per day, are required for each individual; of this, about three-quarters are vegetable and not animal. At the close of an entire year the amount is upwards of eight hundred pounds. Enumerating under the title of water, all the various drinks—coffee, tea, alcohol, wine, &c.—its estimated quantity is about 1500 pounds per annum. That for oxygen may be taken at 800 pounds. The food, water, and air, which a man receives, amount in the aggregate to more than 3000 pounds a year; that is, to about a ton and a half, or to more than twenty times his weight.

This enormous mass may well attract our attention to the expenditure of material which is required for supporting life. A living being is the result and representation of change on a prodigious scale.

It cannot be questioned that the materials which are rendered back to the external world, after having subserved the purposes of the animal, and passed through its system, are compounds of those which were originally received as food, drink and air, though they may have assumed in their course, other, and perhaps, in our estimation, viler forms. Recognizing as indisputable the physical fact that not an atom can be created any more than it can be destroyed, we should expect to discover in the substances thus dismissed from the system, every particle that had been taken in.

What then is man? Is he not a form, as is the flame of a lamp, the temporary result and representative of myriads of atoms that are fast passing through states of change—a mechanism, the parts of which are unceasingly taken assunder and as unceasingly replaced? The appearance of corporeal ideality he presents year after year, is only an illusion. He begins to die the moment he begins to breathe. One particle after another is removed away, interstitial death occurring even in the inmost recesses of the body.

Exchange.

We welcome to our table of exchanges, the "*St. Louis Medical and Surgical Journal*"—a bi-monthly; edited by M. L. Linton, M. D. and W. M. McPheeters, M. D. Its pages bear the impress of industry, originality and the spirit of progress.

NEW PUBLICATIONS.

On the Constitutional Treatment of Female Diseases. *By Edward Rigbey, M. D. etc., etc., Fellow of the Royal College of Physicians, Senior Physician to the General Lying-in Hospital, Examiner in Midwifery at the University of London.* Philadelphia, Blanchard & Lea, 1857.

We hail the production before us as the fruit of lengthened experience, and therefore, in its detail, based upon sound logical deduction. The reputation of Dr. Rigbey, as an intelligent *practical* author is neither a thing of yesterday, nor the offspring of some spasmodic effort to make a book. His system of midwifery has long been regarded as among the most valuable productions of the age, whilst his pamphlet on dysmenorrhœa, published some years since, has ever occupied a high place in professional literature. The latter, it will be perceived, in a greatly abridged form, is incorporated into the treaties we are now considering.

That a great number of the maladies to which the female constitution is especially subject, originate in some general abnormity, seems almost a self evident proposition. That treatment, therefore, to be successful, ought to be constitutional, in its prominent tendencies, seems not less evident. To illustrate the truth of both these postulates, perhaps no form of female disease is better adapted than amenorrhœa and its associate, often, if not its cause, chlorosis. We concur, therefore, in the doctrine taught in the following brief proposition, viz: "Idiopathic amenorrhœa, arising from suspended uterine function, without the concomitant circumstances, just alluded to, is, to say the least, a very rare occurrence." The circumstances referred to in the above quotation, may be thus stated, "a previous delicate and unhealthy childhood; insufficient or improper food; want of pure air and exercise; too close confinement to study in schools or to labor in manufactories; depressing passions of the mind," &c. These circumstances all point, in their deleterious influences, to the state of the circulating fluids; "deteriorated, from defective digestion and assimilation," which "deteriorated condition of the blood, probably becomes a cause

in its turn, of impaired vital energy, the heart and brain being imperfectly stimulated." We think the practitioner of experience and observation, will, at once concede the truthfulness of the following. "The catamenial discharge may be considered as one, among many other functions, which indicate the state of the general health." And again, "no function appears to be so subordinate to, and strikingly influenced by the great processes of the system, as that of menstruation." If then, these positions be accepted as true, how strangely infatuated, or singularly wanting in true pathological attainments must he be who, in treating amenorrhœ and its associated maladies, goes no further back than the mere suspension of the function, and seeks to restore the patient to health through such measures only, as are supposed to exercise a specific influence over the actions of the organs, charged with the elaboration of the menstrual secretion—such as have acquired the appellative, emmenagogue. How unsatisfactory, too, the results of treatment founded on views so restricted, so at variance with what obtains in the great majority of examples. Truly, in the language of our author, "We are, therefore, justified in looking upon the functional derangements of menstruation, not as specific local affections, but as the *local manifestations* of certain conditions of the system." And again, the doctrine taught in the following quotation, corresponds with what we have observed, throughout a somewhat lengthened experience. "Our treatment ought, therefore, to be what is called 'constitutional,' or in other words, directed to the state of the general health; and, with certain few exceptions, the local treatment of these derangements *must be secondary to the constitutional.*" The second chapter is devoted to that painful abnormity of the female constitution, which to a great extent, has been the opprobrium of medical science, denominated dysmenorrhœa, and as before suggested, is an epitome of his paper on the same subject, published many years since.

Here, after having spoken with characteristic clearness of the conditions of the economy at large, as also of particular organs which give origin to this distressing malady, he remarks, "From the above observations, it will be seen that functional dysmenarrhœa may occur under at least five different heads, viz: 1st. Dysmenorrhœa, connected with derangement of the digestive organs. 2d. Occurring in a gouty or rheumatic habit of body. 3d. Dysmenorrhœa of an hysterical character. 4th. In connection with some inflammatory action of the uterus, usually the os and cervix; and 5th. Arising from ovarian irritation. Now, although this division of the subject may seem to some rather complex, yet to the practitioner of enlarged observation, we have no doubt it will not only appear plausible, but phylosophical.

Indeed this or some not dissimilar analytical mode of considering the subject, seems essential to the success of practice, for, as stated by the author, "in each of these forms, it will present certain modifications and peculiarities, which are valuable guides for adapting our treatment to the particular case, and without which, we cannot hope for success." Without attempting a full and analytical review of Dr. Rigbey's treaties, which our proposed limits will not admit, it will be sufficient, after what has already been said, simply to refer to the remaining topics treated of, in the order in which they occur. The book consists of twenty chapters, and succeeding the two already referred to, they are presented as follows: Menorrhagia, its varieties and treatment; uterine and vaginal discharges, their varieties and pathology; inflamation of the os, and cervix uteri, its causes, symptoms and treatment; ulceration of the os and cervix uteri, symptoms, treatment, &c.; displacements of the uterus, including the varieties of prolapsus, and its treatment; retroversion, antiversion and prolapsus vesicæ, and the causes and remedial appliances appropriate to each; polypus uteri and their varieties; fibrous tumors of the uterus; their symptoms and treatment; malignant disease of the uterus, with its varieties and treatment, both constitutional and local; cauliflower excrescence of the os uteri; its characteristics and management; corroding ulcer of the os uteri; its symptoms and treatment; pruritus pudendi, its varieties and treatment; vascular tumor of the orifice of the urethra, thickening of the mucous membrane of the orifice of the urethra, warty vegetations; vascularity, etc.; ovarian affections; oophritis, with the symptoms and treatment, both of its accute and chronic forms, displacement of the ovary, and treatment; and ovarian tumors, with their varieties, symptoms and treatment, as well surgical as medical.

The reader will find this an extended field of professional research, and that, while sufficient is said, and lights are afforded to guide the practitioner to satisfactory results, both in diagnosis and treatment, the work is not lumbered with extraneous matter. He will also find that, in regard to the several maladies, of which he treats, the author has presented, quite fully, the accepted literature of the age, and in a familiar and agreeable style. The book is of moderate dimensions and unpretending, whilst so far as mechanical execution is concerned, it compares well with all others issued by Messrs. Blanchard & Lea. We heartily recommend its perusal to all who would avail themselves of the best sources of information, in reference to the class of diseases, of which it treats.

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K.

Through the politeness of Messrs. Raymond & Selleck, we have been make the recipients of the following books, most of which, we regret to say, came to hand at a period quite too late for separate notice.

Clinical Lectures on certain diseases of the urinary organs and on dropsies: By Robert Bently Todd, M. D., F. R. S. The History, Diagnosis, and Treatment of the Fevers of the United States: By Elisha Bartlett, M. D. The Physiological Anatomy and Physiology of Man: By Robert Bently Todd, M. D., F. R. S., and William Bowman, F. R. S. The Physician's Pocket Dose and Symptom Book: By Joseph H. Wythes, M. D.; and Medical Notes and Reflections: By Sir Henry Holland, from the third London edition.

We avail ourselves of this opportunity to tender our thanks to Messrs. Raymond & Selleck, for the favors they have thus in kindness, conferred upon us. and promise such notices of the above named productions, as they respectively merit, at the earliest practicable moment.

We have also received from another source, the Senate documents of the United States, entitled "Statistical report on the Sickness and Mortality in the army of the United States, compiled from the records of the Surgeon General's office, embracing a period of sixteen years, from January 1839, to January 1855, prepared under the direction of Brevet Brigadier General Thomas Lawson, Surgeon General United States Army, by Richard H. Coolidge, Assistant Surgeon United States Army. Washington, A. O. P. Nicholson, printer, 1856." This too, will receive its appropriate share of attention at no distant period.

The Scalpel, for April, comes to us in its original *octavo* form, well *polished* and *sharpened*, ready for use. It fully sustains the character and position which its unique and entertaining originality has deservedly obtained. Published quarterly, and edited by Edward H. Dixon, M. D., No. 42 Fifth Avenue, N. Y.

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THE
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Original Communications.

ARTICLE I.—*Practical Suggestions.* No. II. By J. ADAMS ALLEN, M. D.

To one who has carefully kept pace with the discoveries of Physiology, there are few subjects which are of greater interest than the relations of fat to the blood and the general system.

The well known milky appearance of the chyle in the lacteals is clearly due to the particles of oil which every where in solutions of albumen condense to themselves a vesicular coating from that substance. Here is the first step in that wonderful cytogenesis which eventually develops the blood or "liquid flesh." The lacteal glands aid in the process by bringing the chyle in intimate contact with developed blood. The direct effect is unknown in its essence, and it is needless to speculate upon it. The undeniable fact remains, that without the aid of oil or fat there is no cell.

The albumenoid vesicle containing fat, is impregnated or vivified by the dotted particles derived from the gland. Some escape, and dissolving yield up their contents to furnish nutrition to their germinant fellows.

The alkaline constituents of the blood, (chyle, or lymph) are the means of this solution.

It would appear that fat is also necessary to the genesis of fibrin, as that depends upon the perfection of the blood corpuscle.

The stomach of Alexis St. Martin is chargeable with begetting great error in physiological notions. Digestion is perfect, or the reverse, according as it occurs in its proper place. Nitrogenized food is freely dissolved and absorbed from the gastric cavity,—oils and fats but to a very limited extent. It is probable that the small amount here absorbed is received by the minute villi as discovered by Dr. Neill (Vid. Am. Jour. Med. Sci. v. xxi. p. 13). In like manner the duodenal and other intestinal mucus membrane by its blood vessels absorbs such portion of the albuminous food as may have escaped gastric absorption. Thus fats and oils are easily digestible in their proper place, which is *below* the stomach even when as readily examined as that of Alexis St. Martin.

Both observation and experiment show that there is within the system a chemistry which will convert not only saccharine, but even nitrogenized food into fat when little or none of that substance is taken as food. This phenomenon is entirely analagous to the production of wax by bees fed almost exclusively upon sugar. They will produce three times as much wax as the amount previously contained in their bodies or in the food taken. But some little wax must be taken in, or they will not manufacture any.

It is quite clear that the liver is the fat laboratory in the animal man. The fatty matter of vegetables in itself is insufficient to supply the requirements of histogenesis and repetition, but its presence in the portal blood favors the conversion of compounds which contain its elements, so that the bile and blood of the hepatic veins contain a very considerable amount. When this conversion is not required as in the case of animals freely supplied with oily food, there is much less bile secreted. Lehmen discovered that in animals undergoing starvation there is an excess of fat and a deficiency of sugar in the portal vein, but that the condition is inversely changed in the hepatic vein. The degradation of tissue is usually, if not invariably, accompanied with fat deposit instead of the previous nitrogenized

substance. Hence in the bodies of those who have died of inanition it is always noticed that the gall bladder is full of bile*—the blood bringing to the liver the result of fatty degeneration of the tissues, this being secreted partly with the bile, and partly, perhaps, converted into cholic acid and sugar.

The demand for sugar is for sustaining the animal heat, the demand for fat is primarily for the evolution of blood-cells, and secondarily for decomposition into cholic acid and sugar. The fatty liver furnishes little bile but much sugar,—the separation of the fat from the blood favoring the evolution of sugar, but the hepatic tissue having insufficient cell energy to further eliminate bile.

It need scarcely to be remarked that fatty degeneration is produced—first, by a wrong or defective state or composition of the blood; second, by an insufficient supply of blood; third, by a deranged or obstructed influence of the nervous system, (eventuating, of course, and being properly included in the first cause) and fourth, by an imperfect, unhealthy or declining state of the part to be nourished.

There is hence no difficulty in seeing that though the cells of the liver may be gorged with oil, yet an insufficient quantity finds its way to the lacteals and the blood. Meantime sugar (liver-sugar) is produced in disproportionate amount, and being oxidated upon all the respiratory surfaces and cells develops more or less febrile heat.

In the healthy condition of the various organs when supplied with their appropriate food, the production of the various secretions we know to be uniform; but man is exposed to almost every variety of condition and food. The proportions must be maintained among the various constituents of the blood, or disease will ensue.

From our present knowledge upon this subject we may look upon the liver as a great regulator in the mechanism of nutrition.

It provides oil from substances which contain but its elements,—hence man can live without taking it directly as food, but as other organs which are called to excessive labor, so this in time must become diseased from this cause alone.

*Does not this explain why mechanical distension of the stomach, &c., with innutritious substances relieves the sensation of hunger—the bile being thus poured out into the duodenum and its fatty portion absorbed?

It unquestionably derives some adeps from the disintegrating blood cells brought by the splenic vein, the hæmatin of the old cells by deoxidation passing to the form of the coloring constituent of the bile,—the iron and oxygen in great part passing to the nutrition of the younger corpuscles. It elaborates liver-sugar for respiratory uses, and, finally, eliminates an unstable chemical portion whose retention tn the blood would be productive of serious mischief.

It has become quite fashionable of late to decry all allusions to diseases of the liver as decidedly old fogyish or behind the times.

Dexterity in percussion, and oracular shaking of the head after applying the stethescope bauble, are deemed sufficient substitutes for acuteness of penetration in discovering the causes of disease.

The urine too has its worshippers and the test tube stand, spirit-lamp and meter, (all well enough in their way) are considered worthy of supplanting the poor old liver of the fathers.

Nevertheless the liver is and must remain one (if not *the*) of the most important objects of diagnostic and prophlactic study. It is the prominent intermediate agent in converting the inert and lifeless to the active and vitalized.

Basing therapeutics upon the views herein set forth, it is seen that the range of administration of the fats and oils becomes exceedingly widened. They are not directly calorifacient, but they are necessary to the building up of heat carriers. They can thus be administered in a vast number of cases *where there is heat of the surface, but poverty of the blood.* Thus in hectic and typhoid fevers and in the later stages of all phlegmasiae, when, as the older writers would say, there is heightened irritability with lessened tone.

Vegetable decoctions, wherewithal these diseases are continually plagued in common treatment, yield sugar and consequent heat or vitiated secretions,—the fats and oils bring living cells into action whereby the regular transmutations and development of each and every tissue arise.

In tuberculosis this is peculiarly the case. Tuberculosis is the manifestation of diseased glandular action, in every case intimately connected with the non-reception or development of fat.

In the child the mesenteric glands and intestinal villi fail to develop the corpuscle or receive the oil.

In later life more frequently vitiated appetite and faulty teaching or habit disqualify the liver for performing its function.

The Vegetarian*ism*, and the "low diet" dogma, implant phthisis in the systems of thousands, and tamely call it "hereditary" as though *vices* are necessarily so.

Consider the vast amount of oil which is secreted upon the investing integument and the waste to which it is subjected by hydropathic scrubbing!

Look at the delicate skin of the consumptive and the rapid oxygenation which is momentarily sapping the foundations of life. Then the disordered appetite, which *secundem artem* from a "dear dyspepsia grows a dire disease."

Inunction of oleaginous substances will, in the cases previously adverted to, afford vastly more relief than the water douching and sponging so much practised. *En passant*,—this is a remedy of much greater efficiency than commonly supposed. In all cases of poverty of blood corpuscles, but more especially in tuberculous cachexia, it is of wonderful efficacy.

In scarlatina its power is well acknowledged, but its *rationale* has not hitherto been satisfactorily explained. No other remedy will like it prevent that rapid decomposition of blood corpuscles so commonly followed in this disease by dropsy or renal disturbance. The fat favors the development of energetic blood cells from albumen which otherwise is strained off in dropsical or urinary flux.

During its operations the lymphatics become true lacteals, and the lymph will grow milky like chyle, though not to the same extent.

Contrary as it may appear to received opinions, the emaciation and flux of diabetes are alleviated by it. Internally administered there is theoretic danger of conversion by diseased hepatic action into sugar and cholic acid, but practically my own experience is favorable to its free use in connection with nitrogenized animal food.

The catalogue of applications, both externally and internally, might be extended to the verge of nosology, but is sufficient that we recognize the principle involved.

There is no so called *tonic* medicine which can exert more than the merest modicum of the impression, capable of being produced by this active class of alimentary articles.

The antiphlogistic regimen essentially consists in counteracting the effects of the received adeps. Abstract oil and you simultaneously take away red corpuscles or oxygen carriers and fibrin producers. Bloodletting does the same. Cholagogues, as mercury, &c., urge the bile too rapidly along the intestinal tract to allow absorption of its hydrocarbon and resulting increased activity of cytogenesis.

Moderately administered they promote it by augmenting the conversion by the liver of this genetic medium and agent. When carried to excess there is resulting cachexia from poverty of the blood in cells, and too abundant formation of liver sugar and hence atonic fever.

In warm climates the production of liver fat is nearly or quite sufficient for the purposes of blood genesis. Here there is danger of excess as is shown by the ready and profuse flux of bile. As with the formative cells of the vegetable kingdom, there is rapid development and speedy decay.

The products of this decomposition readily accumulate, and if not excreted produce their well known effects upon the glands, blood, and nervous centres.

The dietetic and therapeutic principal is obvious.

The already extended length of this paper prevents further consideration of the subject at present. In future papers, we shall see that the presence or absence of oil neither produces nor *cures* all diseases.

Kalamazoo, May 20th, 1857.

ARTIELE II.—*Selections from Surgical Notes.* By PROF. GUNN.

URETHRAL STRICTURE.—The following two cases, occurring simultaneously, I select, because they are illustrative of the treatment applicable to different degrees of urethral stricture. A stricture which is permeable, can, in nearly all instances, by patient perseverance, assisted in irritable cases by appropriate medical treatment, be dilated; and a cure thus effected,

will be so nearly permanent, as to require only an occasional passage of the bougie. On the contrary, a stricture which cannot be penetrated, demands an operation; and I hesitate not in in such cases to recommend the operation, by external incision as the most efficient and certain method of relief.

Case I. X. Y., a professional gentleman applied to me on the 17th of July, 1856, for relief from a stricture which he had contracted several years previously, repeated gonorrhœas being the antecedents. The stricture had gradually increased, until micturition could only be effected by an exceedingly fine stream. The bladder was never completely emptied, and the desire to urinate, was consequently, nearly continuous. My first efforts were unsuccessful in passing the smallest sized instrument, but I finally succeeded in engaging the point of a conical shaped gum bougie, and with gentle but firm and continued pressure carried it forward through the stricture. Its presence was tolerated for ten or fifteen minutes only. The operation was repeated the next day, and the instrument retained for half an hour. From this time, the operation was repeated every day for several days, the instrument being retained for half, or three quarters of an hour each time. This treatment was continued until a number three bougie could be passed, when business took the patient from town, since which the treatment has not been resumed. He can at the present time, pass a comfortable, but not large stream, evacuate completely the bladder, and refrain from micturition as long as most men.

Case II. J. H., a middle aged laboring man, was suffering from a stricture of the membranous portion of the urethra, the origin of which he traced to an exceedingly virulent gonorrhœa which he had contracted several years previously. The stricture had gradually increased, until finally, he could pass his urine only by drops. The desire to urinate was constant and painfully urgent, and he was thus incapacitated for labor. Repeated efforts, with intervals of time, varying from days to weeks, failed to effect the passage of instruments. Softened gutta percha bougies pressed firmly down upon the stricture, showed, by their impress on the gum, an abrupt termination of the canal, with an exceedingly small lateral offshoot. On the

26th of July, 1856, assisted by Doctors Pitcher and Terry, I cut down upon the stricture, by external incision, divided it, and closed the wound over a catheter. Union by first intention followed, but the wound reopened on the 6th day, through about one sixth of its extent, but readily healed by granulation. On the ninth day I discovered a slough upon the under side of the urethra just *anterior* to the scrotum, the separation of which opened a passage into that canal. Its formation I could not account for, as there had been no external pressure, and the catheter was of moderate size.

With this exception, the recovery was rapid and perfect. Under date of May 10th inst., he writes: "I am enjoying first rate health and have been able to labor at all kinds of work since last November."

87 *Shelby street, May 20th*, 1857.

Bibliographical Record.

THE PHYSICIAN'S POCKET DOSE AND SYMPTOM BOOK: containing the Doses and uses of all the principal articles of the Materia Medica and chief officinal preparations; also, Table of Weights and Measures; Rules to proportion the doses of medicine; common abbreviations used in writing prescriptions; Table of Poisons and Antidotes; Dietetic Preparations; Table of Symptomatology; Outlines of General Pathology and Therapeutics. By JOSEPH H. WYTHES, A. M. M. D., author of "The Microscopist." "Curiosities of the Microscope," etc., etc., second edition. Philadelphia: Lindsay & Blackiston. 1857.

Generally speaking we regard abstracts like the one before us as of minor consequence to the practitioner. Too often, they are permitted te take the place of the more elaborate and instructive works, and hence it will be noticed, that those who appreciate them, are, most generally, quite superficial, if not rountineists. We would not be hypocritical; but we greatly misapprehend the true character of the knowledge, which is essential to constitute the competent, the ready, and therefore, the successful practitioner, if the idea that seems to have occupied the mind of the author, and which, doubtless, prompted its publication, can be realized.

Verily, it looks remarkably like a desire to *pocket* the *physician*, while the mere shadow of mortality, which wears the cognomen,

Doctor, may have his cranium filled with anything and everything, rather than the fundamental principles of his science, or allow it to be grossly, most inveterately jejune.

Again, if it were supposed that the prescriber, as would appear from the *title*, were expected, on visiting his patient, to draw upon his "Pocket Dose and Symptom Book," to the exclusion of treasured thoughts and reliable observations and recollections, we confess it were to regard him as a sort of machine, and the business of prescribing nothing more nor less than a mechanical process. Regarding the work, however, as containing valuable matter, which, at particular times and in proper places, may be advantageously appropriated, we must consider the *title* a misnomer.

Let the book, then, as the lexicon, be on the table, ever convenient for ready reference—to revive in the recollection, a *name*, a *proportion*, or a *formula* and it will be in a position to accomplish all the good of which it, or any like production is capable. Strictly speaking, it is designed to subserve the purposes of a "*vade mecum*" and is constituted as follows:—"A table ef weights and measures, rules for proportioning doses, a list of common abbreviations, a table of poisons and antidotes, a classification of the Materia Medica, an alphabetical list of the principal medicinal articles and preparations, a table of symptoms of diseases and a brief outline of General Pathology and Therapeutics.

The general arrangement is satisfactory, and the combinations and formulæ are reproductions, chiefly, of the officinal preparations of the most approved pharmacopiaœ. The mechanical execution is neat and substantial. K.

To be had at Raymond & Sellecks.

The Phyliological Anatomy and Physiology of Man. By Robert Bentley Todd, M. D., F. R. S., Fellow of the College of Physicians and Physician to King's College Hospital, and William Bowman, F. R. S., Fellow of the College of Surgeons, Surgeon to King's College Hospital and the Royal London Ophthalmic Hospital, Late Professors of Physiology and General and Morbid Anatomy in King's College, London. Complete in one volume, with two hundred and ninety-eight illustrations. Philadelphia: Blanchard & Lea. 1857.

This large and ardently expected production is finally completed and offered to the medical fraternity of this country in a beautiful and imposing form. We said and really expected—it was so, for the two following reasons; first, the talents, attainments and facilities of the authors were familiar to the professional public, and second, it was

promised that the work, so far, at least, "as the more important points" of anatomy are concerned, should rest upon original "investigations," and upon a repetition of experiments, or on new ones, instituted for the purpose of settling questionable points, where topics of sufficient importance and of absorbing interest should offer.

Two other considerations served to heighten the ardor of expectation that rested upon the professional mind, in reference to the forthcoming labors of Messrs. Todd and Bowman. One was, the avowed design of the authors,—"Following that great master, Haller"—"of giving a greater degree of prominence than had been usual in physiological works, to anatomy; and therefore, providing for "a more thorough training in its several branches, descriptive, physiological and comparative, necessary to the formation of those habits of mind which best fit their possessor for the successful investigation and the correct appreciation of physiological science." Another was, the prospect that physiology was to be reviewed in its entirety, and rewritten by men who were themselves enthusiasts in physiological research, and whose position afforded them all the facilities necessary to the promulgation of the great truths of the science, and, as far as possible, fixing them on the most substantial basis. This, in the judgment of the best informed, has been regarded as a desideratum, somewhat difficult to be accomplished, to be sure, and yet, from the difficulties involved, only the more necessary—the more imperatively demanded. The authors have deemed themselves called upon to offer an apology for the delay in bringing the work to a close, not far from fourteen years having elapsed since its commencement. In our humble judgment, however, neither the *profession* nor *science* has suffered loss by such delay. While it may be conceded that "the advances" in anatomical and physiological science, "attributable" to their "own labors" may be "small" when put in contrast with the immensity of the field of research over which they have passed, and the hundreds of others whose learning, ingenuity and skill have been directed to the same objects; we think it will be conceded also, that, by *reviewing, rearranging and rewriting the whole, expunging what had become superfluous or irrelevent*, and offering in a terse and agreeable style, only what may be regarded as established—as facts in science,—they have done incomparable service. In no department of medical science, perhaps, are hasty conclusions, the semblance of principles, or the substitution of hypotheses for truth, more pernicious than in physiology.

Affording as it does, the only sure basis of accurate deduction, in reference to normal function, it is the sole source of accurate reasoning and deduction in regard to function, perverted and disarranged by

the causes of disease. Nor is it less essential to an intelligent and truthful interpretation of pathology and therapeutics. All things considered then, we scarcely question, the profession as a whole, will regard it as fortunate that haste has not marked the progress of the work. That *Physiology* as a science may even now be considered perfect, is not assumed, but, that, in thus expurgating it of the superfluous, irrelevant, the doubtful and not unfrequently the fanciful, none will question that it has more nearly approximated perfection. While numerous other productions are before the profession, which are justly entitled to high commendation, we deem it not invidious, either to them or to their authors, to say that this, doubtless, is the most complete work on physiology in the English language.

Neither analysis or review seems necessary to introduce it to the professional public, since considerable portions of it have been in progress of publication for some years, and the more studious of the faculty are already familiar with its contents, its style and its merits.

It therefore only remains for us, in conclusion,—appropriating the language of another,—to observe, that, inasmuch as to be an intelligent and useful practitioner of the healing art, one must be well versed in Anatomy and Physiology, and in the relation of these sciences to each other, in his endeavors to furnish himself with this most necessary information, the reader "will find the work before us an invaluable aid." K.

For sale at Raymond & Selleck's, in this city.

Spirit of the Medical Press.

On the Haschisch or Canabis Indica. By John Bell, M. D., Derry, N. H. From the Boston Med. and Surg. Jour. Concluded.

A few words upon each of the kinds of psychical disturbances caused by the *Haschisch* will conduce to the better understanding of its action, and of its relations with the analogous, or precisely similar phenomena of insanity.

Throughout the whole period of its effects, there is a sense of pleasurable excitement. By the French authors who have experimented and written on the subject,* this feeling is regarded as one of the most marked phenomena of the drug. Doubtless this was the case with them: with myself, it has never been so great as is generally represented. It is true there is a strong tendency to laugh, but it is a laugh in which the feelings participate

* Annales Medico-psychologiques—*passim.*

to a very slight degree. It is the same to whatever subject the thoughts are directed. In delusions of an agreeable or disagreeable character, there is the same smile. It is different entirely from that state of mental excitement, attended with pleasurable emotions, which is met with in the first stages of many cases of insanity. In such instances the sentiments of pleasure are caused by the most sanguine anticipations of success in every wild project. It is a feeling which would be very propper, did not its cause show too plainely the intellectual disturbances which pervades it. There is nothing like this in the effect of the *Haschisch*. The face does not as ordinarily prove a true index to the mind. While the thoughts do not pause long enough upon any subject for the feelings to be touched, the face is covered with smiles. Disagreeable anticipations and a joyful expression of countenance do not seem at all incongruous. It seems to be all on the surface, leaving the depths below unmoved. The condition is much the same as in dreams, when we are often surprised at our own callousness to all impressions of pleasure and pain: when good and bad fortune alike pass over us without exciting happiness or sorrow. Perhaps upon different temperaments, the action of the drug may be essentially different. My own experience of it has been sufficient to convince me that the sentiments of happiness may be completely lost in the crowd of other phenomena. It wonld have been hardly worth while to notice so slight a peculiarity, were it not that one of the most interesting of its proposed therapeutic uses is in connection with this property.

It has been proposed by M. Moreau to take advantage of this reputed action, to combat certain varieties of insanity connected with melancholy and depressing delusions. If a series of hallucinations of a pleasing character, or a state of pleasurable excitement, could be produced and kept up for a length of time, the change might become permanent. The morbid chain of thought might be broken, and the mind resume its healthy action upon the withdrawal of the medicine. Used in this way, the drug would seem to hold a middle place between medical agents as ordinarly used, and the moral discipline which is principally relied on at present. This proposed application is original with M. Moreau, but the idea of superseding melancholy by exciting pleasurable emotions, is certainly as old as the time of David, whose harp succeeded in driving the evil spirit out of Saul. Such means, in cases of true insanity, have in practice fallen into utter contempt. Music, *per se*, never has cured an insane patient in our times, or, as a late writer says, "music never cures insanity, except such cases as appear in the comic opera." Music may be, and unquestionably is, of value as one among the diversions and employments which take off the tedium of hospital life, and *pro tanto* occupy the space in the disordered mind, which would otherwise be absorbed in diseased acts and reflections. M. Moreau reports several instances of doubtful cures effected by the medicine, but confesses that his experience of its use is limited. The following cases from his work will illustrate its effects upon the variety of insanity in question. "Two patients suffering under melancholia, after five or six hours experiences a lively excitement, with all the characters of gaiety and sprightliness which we have observed. One especially, tormented by terrors of imagination and melan-

choly delusions, who had not spoken ten words a day for more than nine months, did not cease no chat and laugh and joke during the whole evening. I rarely found in his words any connection with the ideas which habitually occupied his attention. However, the excitement over, both fell again into their previous condition."

The use of the *Haschisch*, with this view, has not been extensive in this country—not so extensive as it deserves to be. It has been tried, however, in several of the insane hospitals, but the results have not been encouraging. Indeed, in most cases they have been completely null, so that the suspition has been engendered that it does not possess the physiological action attributed to it. Nothing could be more unfounded; there is no article in the whole *materia medica* which according to my observation, is more to be depended upon to induce its peculiar effect. But it must be given in doses much larger than those usually employed, that any effect may be experieced from it. We could hardly expect that cases having their orgin in extensive physical disease, can be benefited in this manner. But in functional diseases of the brain, it certainly gives promise of possessing powers more directly usefull than any other specific drug of the materia medica.

Every one is aware how much our ideas of time depend upon the rapidity of thought, and the degree of attention we give to passing events. While the mind is buisily engaged in conversation or reading, we seem to lose all notion of the succession of events; we live in a world of ideas, retaining, however, an intimate sensation of the fact that we are only thinking. In this state we take no note of the passage of time; an hour is compressed into a minute. In dreaming, the mind is just as busily engaged, and yet we may magnify an instant into any conceivable limits. In the state of reverie, the same thing occurs, though to a less marked degree. The fact is familiar to every one that we may be awakened by some noise, and in the interval between sound sleep and complete wakefulness, we may pass through a long imaginary conversation, or an extended series of events, ending with some explosion or catastrophe, which on being completely awake, we are aware is only the noise which has awakened us. Our ideas of time, then, do not depend exclusively upon the succession of mental pictures. They are much more closely connected with the degree to which we indentify ourselves with our thoughts. Just in proportion to their vividness and the extent to which they overcome our attention to the fact that we are thinking—not acting, just in such proportion does time correspond to what it would be, were the subject of our thoughts real objective facts. This sensation of the excessive duration of time, is perhaps the most remarkable and obvious of the effects of hemp, and the extent to which it is experienced may be regarded as the best means of regulating the dose. It is never absent, throughout the whole duration of the mental disturbance, and the deception is so complete and so disagreeable, that no one who has taken it need ever be in the slightest doubt as to whether he is experiencing its effects or not. In the higher degrees of its action all definite ideas of time are lost. Past, present and future exists no longer. The whole existence is concentrated in the train of thought we are engaged in. In dreaming, this change in the ideas of time is not unpleasant, nor we cannot observe the discrepancy

between our present and former sensation. The following case of insanity, where all proper notions of time were lost, is abridged from Moreau. "A young lady, during the first few days of an attack of maniacal excitement, believed that she had no longer any age. She imagined herself to have lived at every historic epoch to which memory carried her. Those about her were reproched with having stolen her measure of time. Her mother was acknowledge as such no longer, for the reason that she could not have a mother younger than herself." Another believed himself to be God, because he had existed from eternity. Under the influence of *Haschisch*, the ideas of time may be regulated by the intellect, and consequently one is never led astray, except when the attention is directed to another subject; while this is the case, the sensation of immense duration of time is continually and intimately present. Without having experienced it, no one can form the slightest idea of its vividness and reality.

The errors in regard to space are dependent for their existence upon those of time, and are of much the same nature. During the existence of the *fantasia*, an object does not appear more distant than under ordinary circumstances. But while the hand is stretched forth to take it, and we are concious that the movement is executed with ordinary rapidity, such a length of time has passed away, that only the exercise of reflection and the direct evidence of the sense of sight, can convince us that the hand has not moved through a space corresponding to the time it seems to have been in motion.

The deception is never so complete as that in regard to time: a glance of the eye corrects it, but it rales again as soon as the head is turned. It is in this circumstance that insanity differs from the delirium of an ordinary dose of hemp. In the former, and in cases of larger doses of the latter, the sense of sight does not correct the delusion. The sensation coming from the eye are overruled by the reality of those having their origin in the imagniation. It is only during the occasional lucid moments of *Haschisch*, that the judgment can be exercised, or the eye directed to an object to appreciate its circumstances. Not that the muscles are paralyzed, but the will does not put them in motion. As in an ordinary reverie, the vacaut stare shows that the mind does not take cognizance of the objects towards which the eyes are directed.

The first effects of it upon the intellectual faculties, are a gradual loss of power to direct the thoughts. The sense which is ever present in mental health, that we are responsible for what passes in our minds, is lost. This loss is never partial as to any single thought. We do not perceive this power to be gradually slipping away so that we can mark each step of its departure, but suddenly, like lightning, it occurs to us that, the moment before, some thought came into the mind by a channel very different from ordinary. To use a well-understood manner of speaking, we have nothing to do with its presence—it came there of itself. In small doses, its effects are limited to this degree of mental disturbance. If the quantity taken has been larger, these attacks recur oftener and oftener, the experimenter loosing and regaining the conciousness of directing the course of thought many times in a minute. When under the highest degree of its action, the

glimpses of the fact that our thoughts are not our own, are few in number and momentary in duration. In this state of veritable mania, ideas come and go with a rapidity completely inconceivable in ordinary mental conditions. Some glide through the mind without seeming to make any impression at all; others become realities as perfect as though admitted through the senses. Yet in all this overthrow of the governing power, there is a certain degree of connection in the succession of ideas. But the attention is so slightly concentrated upon even the most vivid of them, that the slightest occurrence, the movement of a hand or a word addressed to us, sweeps them away in an instant. We live in the thought that is uppermost at the time; those which are past are as nothing, and we take no thought of what the future are to be. Intentions formed the moment before, are lost. If we wish to say anything, the chances are equal that it will be forgotten—burried by the succeeding idea. Let one in this state attempt to write, and he will produce a composition similar to what is often seen by those practically acquainted with hospitals for the care of the insane. Broken phrases, words without the least connection, with occasionally a few sentences having some obviously connected ideas at bottom, make a compound higley characteristic.

The conversation is more connected than the writing, for it is better able to keep up with the thoughts. In both there is some connection in the mind of the individual; while one word or part of a sentence is being written, a multitude are gone, and when the pen comes to a stop, it goes on again with the train of thought which is present at the instant, without endevoring to go back and take up the thread which is lost. In talking, one feels compelled to finish the sentence without an instant's hesitation; if the word which expresses the meaning does not occur, another is substituted for it without reference to its signification. If we hesitate, the train of thought is overwhelmed by the rushing tide of ideas, which never waits for utterence. The connection between successive conceptions, however, is not always perceptible to the individual, even in the slight degree referred to above. A large portion seem to be mere isolated pictures, drawn alike from memory, from imagination and from incidents which happen to be taking place at the time, but all strangely confused and equally transient in the impression they make. This mental state is so similar to many cases of insanity, that it would be difficult, if not impossible, to distinguish them without having recourse to their duration and the causes which produced them. The extreme rapidity and vividness of thought are absolutely identical with the most observable phenomena of that disease.

Mania is by far the most hopeful species of insanity, in respect to its prognosis, while dementia is the most hopeless. It has been thought that in cases of mental disease, tending to fall into the latter state, the powerful stimulation of the hemp might perhaps arrest the downward course, and place the patient in a state more amenable to treatment, and consequently more hopeful, as regards chances of ultimate cure. With these ideas in view, it has been administered in very heroic doses in all stages of hebetude. But the mind in this condition seems to have completely lost its wonted resiliency: it responds no longer to what were once powerful

stimuli. In this state the hemp produces no perceptible effects, in the more advanced stages, and only the slightest change in any. All hopes of benefit resulting from its administration in these cases, have been abandoned by the author, himself, of the proposition—a sure proof of its utter want of any probability of value.

But the most interesting of the effects of the hemp are in connection with the subject of delusions. It is in reference to these that it can be put to the best use in assisting to understand the workings of disease. There are very few cases of insanity but exhibit delusions at some period of their course, and there are not few persons, ordinarly reputed sane, who are subject to them. A clear understanding of them will conduce, more than anything else, to a full understanding of those mental states which are spoken of under the collective term insanity. Their importance will justify a closer examination than any of the other morbid mental manifestations, caused by the drug of which we are speaking.

Before the time of Esquirol, all the mistakes of madness were included under one term. He saw reoson to divide them into two classes—illusions and hallucinations; the first taking their origin chiefly in a disordered condition of the senses, the latter depending exclusively upon intellectual disturbance. These distinctions of the great master have been adopted by most succeeding authors who have written upon the subject. Whether these divisions are founded in nature, and show evidence enough to demand adoption, we shall presently examine. In the mean time, a few words on the origin of hallucination in addition to what has been said before. They have the same relation to disorders of the intellect that ordinary states of conciousness do to healthy manifestations of that function. There is no word which gives any better idea of the process by which these figments of the brain come to be regarded as facts, than there is of the way in which we come to believe so strongly in our own existence, or the existence of the objects we feel or see. There is certainly not the slightest similarity between hallucinations and ordinary mistakes in regard to the existence of facts. One pre-supposes the exercise of the memory; the other acts without it and even defies it. The circumstances under which they have their origin are as varied as the hallucination themselves. Many seem to be purely intellectual, at least the chain which connects them with the external world is too long and complicated to be followed. Some idea; disconnected perhaps, or having a very loose connection with those preceding it, assumes the attributes of reality, and for the future it is an idea no longer, but becomes a fact, and is reasoned and acted upon as such. The great majority of the hallucinations of the insane have this origin. Their fears and suspicions, their strange actions, their pride and humility, are often founded upon some belief which they act upon but do not disclose. Perhaps in many instances it is too vague to be put into words. A thought suggested by another may be adopted in the same way and become a thought and finally a belief of our own. Some sensation of pain or uneasiness in a particular part of the body turns the thought in that direction, and forthwith a delusion is established. This is peculiarly apt to be the case in hypochondria, where the stomach being in most cases the present organ, is believed to be

the abode of some reptile. Esquirol relates cases of a woman suffering under chronic perionitis, who believed the Pope was holding a council in her belly; of a military officer who had rheumatism in the knee, and believed there was a robber confined in it. These last, however, he gives as instances of this variety of illusions, though in this he is not followed by other writers, who confine themselves exclusively to the five senses.

The idea of illusions is perhaps too strongly fixed, by the ability and influence of writers who have acknowledged their existence, to be easily refuted. There are certainly no such phenomena among all the varieties of psychical disturbance caused by taking the hemp, though there are delusions which if observed in another and judged by the rules laid down by writers on mental pathology, would be considered as striking instances of them. There is never the slightest lession of the sentiment extremities of the nerves, so far as I have experienced. The senses are as perfect as ever, and the information given to the mind is as correct as though the latter were in its natural condition. It is in the disordered state of the psychical system that we must look for the origin of all insane delusions, whether having reference to objects of sense or not. There is no ground for the distinction that has been made between hallucination and delusions. On this subject Ray* says, "that the functions of the senses are sometimes greatly perverted, there can be no question; but it needs more evidence than we yet have to prove that such perversions have much if any part in producing these illusions." The principal arguments for the existence of sensory illusions are of this kind: a person may have continually before him some vision, as long as his eyes are open, but upon shutting them the delusion disappears. Or it may last during the day and disappear at night, or *vice versa*. It is inferred from such cases, which are sufficiently numerous, that the whole diffiulty is in the sentient extremities of the sensory nerves, and that as soon as these cease to act, the object seen disappears. The true explanation of these and similar cases seems to be this. The mere contact of light with the retina gives rise to ideas, perhaps immediately, perhaps through a crowd of others preceeding them, which are taken for verities. And all this, while the objects within view are seen as well as ever. But the sensation caused by sight are too feeble and receive too little attention to compete with the vividness of those supplied by the perverted intellect. The facility with which the evidence of the former is passed by, and credence given to the latter, is astonishing and inexplicable to one who has not experienced it in his own person. Esquirol mentions the case of an individual who, under the influence of such a delusion, took a window for a door, walked through it and was precipitated from the third story to the ground. If there had been the slightest doubt in the mind of this person, the uncertainty would have saved him. He must have seen what was before him, but pre-occupied with the notion of the door, the evidence of the eyes made no impression. The hearing is passed by in the same way, but still oftener, for sounds are rarely so continuous as objects of sight. A person under the influence of hemp may carry on a tolerably well-connected conversation, till suddenly he makes some remark which shows that it is made in refer-

* Medical Jurisprudence of Insanity.

ence to his own thoughts, rather than to anything which has been said before. He confounds what is passing in his own imagination with the thoughts of others, and consequently attributes to them motives and intentions which they do not possess. His memories of the past and anticipations of the future are drawn from the same inexhaustible fountain. Add to these false premises, false reasoning, warped affections and a disordered will, and the picture of insanity is complete.

Any one who, under the influence of Cannabis Indica, has seen what the human mind is capable of becoming, cannot but feel a lively interest in those who are suffering under mental alieniation; he cannot but look with hope to it, as a means of more fully comprehending what is the most distressing of finite calamities, and he cannot but think that a substance, the action of which is so powerful and unique, will be found, when fully understood, to possess valuable therapeutic virtues. But this point can only be set at rest by a series of experiments more careful and extended than has yet been made.

New Mode of Employing the Taxis in Hernia. *By B. G. Darley, M. D.*

"I have read in your last number a report of a lecture on the taxis in hernia by Mr. Skey. I am induced to send you a mode of manipulation which he has not mentioned, nor any one else that I am aware of, and which I found very successful in a case I was called to see some time since; it may be of use to him as well as others. It was an inguinal herina; in a young man, that had been strangulated for the greater part of a day; size not very large, but very tense, and hard attended with the usual symptoms. —vomiting, confined bowels, &c. I tried the taxis, as it is called, but failed I then made him bend both his knees, and took one under each arm and with his head hanging, I gave a good shaking as long I could hold him, telling him to press up the tumor as well as he could himself. On letting him down, I found the tumor not so low down in the scrotum as it was; it was soft, and holding it in my hand for a minute it went up. The *rationale* of this proceeding is very easily explained, and is on the same principal which succeeded in dislodging the half-sovereign from the larynx of M. Brunel, when the surgeons were about to open his wind-pipe."—*Dublin Med Press, Feb*, 4, 1857.

Convulsions.

Dr. McMeens, of Sandusky, Ohio, declares (Western Lancet) that he has treated infantile convulsions arising from derangement of the digestive organs with cannabis, with most satisfactory results. He considers this agent counterindicated where there is much vascular disturbance or cerebral complication; in other cases it may be advantageously employed. These views are illustrated by reports of four cases exhibiting the efficacy of the hemp treatment.

[Communicated for the Boston Medical and Surgical Journal.]

OXIDE OF ZINC FOR PROFUSE SWEATS.

Messrs. Editors,—I was very glad to see, in your Journal of yesterday, Dr. Abbott's report of cases of "Oxide of Zinc in Night Sweats," and I hope that, like so many pictorial illustrations, they may tend more fully than a general statement of the fact to impress upon the medical public the great value of this remedy as a means of treating a most exhausting and uncomfortable symptom. Dr. A. refers to my having spoken of it at the meetings of the Medical Society; I have done so several times during the last two years, about which time I first saw it alluded to in Braithwaite's Retrospect, and I have also frequently mentioned it, as I have had an opportunity, to physicians out of town as well as in town. From my personal knowledge of the remedy, I felt it to be my duty to do so, that it was due to suffering humanity; for I fully subscribe to the strong language in which Dr. A. recommends it. During the last year I have been in attendance at the hospital eight months; and, as there has been an unusually large number of cases of phthisis, I have had most ample opportunities to test the powers of the zinc; and the result has fully confirmed the impressions that I received of it the previous year. It was given freely whenever there was perspiration enough to require treatment, and without any regard to the stage of the disease. Seven grains were given in substance, and generally at bed time, but in the course of the day if required; the dose being repeated in three or four hours if necessary. Sometimes ten grains were given; and I never heard the slightest complaint of any unpleasant effect from it. The medicine was given alone; and if it has any efficacy in checking perspiration, and on the other hand produces no disturbance of the system, I see no reason why anything should be added to it. Conium and hyoscyamus I have often used in various forms of disease, and in quite as large doses as they are generally used; and I have thought that bread pills would have done as much. When we are testing a new remedy, at least, it would seem best to give it in as simple a form as possible.

My object in this communication is not merely to add my testimony to that of Dr. Abbott, but to say that perspiration may probably be successfully treated by the zinc when it occurs in other diseases as well as in phthisis. It may have been so used; but if so, I have not seen any statement to that effect. Seeing no reason why it should not be so used, I prescribed it in two cases at the hospital during the past winter, and in both of them with very marked effect. The first was that of a healthy man who was convalescing from intermittent fever; he perspired very copiously for two or three nights successively, and, having reported the fact, said that from his previous experience he knew he should have a return of his paroxysms if the symptom was not stopped. The zinc was directed, and it was stopped from that time. Secondly, a strong, healthy man, under an attack of acute rheumatism, had the profuse perspiration that so often accompanies this disease. It is well known that the patient gets no relief from this symptom; and he certainly suffers enough when his wet clothes are being removed. It seemed to be a fair case, then, for the trial of the zinc, and it

was directed. The perspiration was very greatly diminished; and without any unpleasant effect, of which their certainly might have been some apprehension; the joints were no more affected, nor was the heart, of which last there had been some disturbance early in the disease. I have also seen perspiration checked under its use in a case of cancer of the womb.

The sulphate of zinc, to which Dr. Abbot refers, I have never used, nor have I heard any one here speak of it from personal experience, as a remedy for perspiration. It certainly would be proper to try it when the oxide fails, which it does, however, very rarely. As to the other means of treating the symptom in question, I have failed so often with sulphuric acid that I have not used it for a long time; and I certainly intended to use it in sufficient doses. The rubbing over the surface of the body with oil or a solution of alum would, I should think, be a pretty severe penance in many cases of phthisis; though I am aware that both these means have been successfully used here.

Trusting that the oxide of zinc will be fairly tried by the profession as it has been recommended,

I remain yours, respectfully, J. B. S. Jackson.

Boston, May 1st, 1857.

Sore Nipples.

M. Legraux, has found the following treatment very efficacious: Colodion is rendered elastic by the addition of half a part of castor oil and one and a half parts of turpentine to thirty of collodion. It is applied by means of a pencil over a radius of some centimetres around, but not on the nipple. Over this is applied a piece of gold-beater's skin, having some pin-holes opposite the nipple to allow of the passage of the milk. This, by the drying of the collodion, becomes rapidly agglutinated. Before suckling, the gold-beater's skin is moistened with a little sugar and water, and becoming soft and suple, easily admits of suckling. If it is cracked, it must be replaced.—*St. Louis Med. and Surg. Journal.*

Homœopathy, Spiritualism, and Suicide.

The Philadelphia papers announce the death by suicide, of a young man, a student in attendance on the Homœopathic Medical College of that city, who, having embraced the spiritual delusion, became enamored of a married female, also a spiritualist, and failing to carry out his criminal design of inducing her to forsake her lawful husband in order to become his paramour, ended his miserable existence by taking hydrocyanic acid. This is but another and a melancholy evidence of the evil effects of the so-called spiritual philosophy. It also shows that there is a very strong affinity between the various absurd isms of the day. When the mind embraces one capital error, it is rife for all others.—*Ib.*

A Monument vs. A Coffin.

During the prevalence of the yellow fever last Summer on the South side of Long Island, two noble young physicians fell a sacrifice to their zeal in the service of their afflicted neighbors. The names of Dubois and Crane are enrolled with the names of those moral heroes who have died battling the woes and sufferings of their fellow men. Their grateful townsmen of New Utrecht intend erecting a monument at a cost of twelve hundred dollars, in the grave yard where they lie side by side.

Among those who fled upon the outbreak of the terrible scourge in another district, was a physician, who had enjoyed the support of a good practice, abandoning his patients, two of whom were lying ill of the fever. He viewed from the distance of several hundred miles the ravages of death, and heard the cry of help from his deserted home. The fever subsided, and the timid ventured to return, among these our chicken-hearted doctor. So one bright frosty morning this Fall, the rusty hinges of his office window creaked as they admitted light to his neglected apartment. The cobwebs were swept from the medicine bottles, which had stood for months untouched. "*Hydragyri. submurias et Pulvis Doveri,*" looking out from their dusty cases, would speak a rebuke that they had so long been left without being sent upon an errand of mercy; but all unconscious, the doctor rubbed his hands with the satisfaction that he would once more be employed.

Thus a day was spent in delightful anticipations; night came—so did the morning; but what horror was depicted upon the doctor's countenance as he looked from his window; for lo! there, suspended in the air, hangs a coffin; its polished surface and glittering plate, inscribed with his name and departure, reflect the beams of the morning sun. Upon taking it down, he found a note from his surviving townsmen inviting him to be at home that night; as they intended to visit him, and place his remains in the mahogany coffin sent him. We need scarcely add, that the doctor, considering his remains in his own possession better off than in the hands of his "surviving neighbors," made tracks, and has not been seen since in that locality.—*Amer. Med. Gaz.*

Treatment of Scabies by Sulphuret of Calcium.—*By W. B. Kesteran, Esq.*

This treatment has been completely successful in every case in which I have tried it. I have not kept an exact record, but should state the number at between thirty and forty. At the parochial institution in which I have had opportunities of putting it in opperation, the greatest satisfaction is expressed at getting rid of the old filthy proceeding of inunction with sulphur ointment, and the saturation of blankets, &c., with the greasy mass.

Directly the slightest appearance of scabies manifest itself, I have the part well washed with the solution of sulpheret of calcium for half an hour, and then left to dry. This proceeding is repeated on the following morning; and at night, or next morning, ablution with soft soap is performed. It is very rarely that a third application is requi-

red; in most cases, the second is unnecessary, but I enforce it in order to make security doubly sure. When the washing has been thoroughly and effectually peformed, the apex of each vesicle appears of an opaque yellowish white color, indicating that the sulphur has penetrated to its contents, and has destroyed the acarus.

So speedy, cleanly, and effectual a method of curing so loathsome a disease, is an immense boon, and connot be to widely made known. By its means an offensive and often tedious plan of treatment is superseded.

The cases with which I have had to deal, it should be stated, have been nearly all recent; but I am informed by my friend Dr. Fuller, of St. George's Hospital, that he has sceeeded by the same plan in curing a case that has long resisted ordinary modes of cure.—*Association Med. Journal, Jan* 28, *p.* 549.

Case of Enuresis successfully treated with Fluid Extract of Pareira Brava.

Sometime during the past summer a young man, aged 24, carpenter by trade, made complaint to me that ever since his boyhood he had been troubled with the bad habit of emptying his bladder while asleep in bed. That at times it would leave him, but only to return, after a short respite, with redoubled force. That he had tried, morally and physically, to overcome it, but all his efforts had been vain.

At the time of his call his general health was not good, and consequently my first treatment was directed to its restoration. There was no appearance in the urine that indicated any organic affection of the bladder; on the contrary, in every respect it appeared healthy, and during the day was not in any ways troublesome. Various remedies were ineffectually employed.

Having seen the following combination recommended, it was also used as far as prudence could justify.

R.—Ex. belladonna.
ex. hyosciamus *aa* grs. xvi.
white sugar . . . dm. i.
camphor water . . oz. iss.; of which a teaspoonful was ordered just before going to bed each night. But no good resulted.

Repeating his visit at an hour when I was specially employed, I handed him a vial of *Fluid Extract of Pareira Brava*, which was standing upon my prescription case for another patient, and directed him to take a teaspoonful three times a day, and requested him to call at the end of a week if it did him no good; but if so, to continue it till he had used all of it. Some four months afterwards he called to pay his bill, stating that the last medicine had acted like a charm—to use his own words—that his affection had been relieved after taking a few doses, and had not since returned; that he also felt better, both in mind and body than he had for years. In this case, which I regard as one of atony of the bladder, the pareira brava answered a good end in restoring tone to the organs, and relieving the patient.—*South. Jour. of the Med. and Phys. Sciences.*

Mr Startin's Method for the Prevention of Pitting in Small-Pox.

"The plan consists in applying the acetum cantharidis (P.L.) or any vesicating fluid,* by means of a camel-hair brush, to the apex of each spot or pustule of the disease, on all the exposed surfaces of the body, until blistering is evidenced by the whiteness of the skin in the parts subjected to the application, when the fluid producing it is to be washed off with water or thin arrow-root gruel

"The vesication for each pustule should not be larger than the eight or sixth of an inch in diamater, leaving intact the boundaries of the inflammation, excepting where the malady has become confluent, when the entire surface so affected shonld be vesicated.

"With respect to the best period of the eruption of small-pox for making this application, although between the fourth and eighth days should be preferred, the vesication has seemed to me to have been efficacious whenever it has been practised before the slough has formed, evidenced by the secretion of pus, which slough is at once the cause of the pitting, and the peculiar characteristic of this formidable malady.

"The only after-treatment in these cases consists in puncturing the blisters with a needle, in keeping the affected skin clean by means of arrow-root or rice gruel (avoiding soap of every kind), and in bathing the eruption several times a day by the aid of soft sponge or linnen wetted with the following lotion: R. Sodæ biboracis, scruples j; Ammoniæ sesquicarbonatis, scruples j; Acidei hydrocyanici diluti, drams j; Glycerini destillati, ounces ss; Aquæ rosæ ad ounces viij. M. Ft. lotio.

"The pain attending the application of the vesicating fluid is very slight and transient, disappearing almost simultaneously with the ablutions recommended, nor does the blistering add much to the disfigurement, while it relieves the pyrexia and cerebral symptoms, should they be present. The *rationale* of the benefits arrising from the method appears to me to be comprised in John Hunter's observation, that 'if you can succeed in curing a specific disease;' which he calls 'the mode of cure by an iritation different from the disease;'† for he holds elsewhere, that 'no one disease can have two distinct and critical inflammations.'"—*Medical Times and Gazette*, Febuary 31, 1857.

* It will be observed, that this practice of vesication is the opposite to that recommended by the writers advocating nitrat of silver, who desires to avoid the blistering process.

† Hunter on the blood, vol. ii, page 131, et seq., vol. i, page 454.

Tincture of Iodine for Vomiting in Pregnancy.

Dr. Eulenburg, of Coblenaz, tells us, in the *Gazette Medicale Etraugere*, that this tincture, even in small doses, is one of the best agents for the relief of the vomiting, which so often distresses pregnant woman. He prescribes it very diluted, as follows: tincture of iodine, one part. rectified alcohol, four parts and a half; mix. He directs of this diluted tincture three drops in a little water. This remedy, in addition to its anti-emetic effect, calms the often accompanying cardialgia. He has not derived the same good effects, in these affections, from the iodide of potassium.—*Medico-Chirurgical Review.*

Secondary Syphilis treated by a new preparation of Iodine.

The object of the paper by Mr. Christopher is to introduce to notice a new compound, which, combining the good effects to be derived from iodine, is devoid of its disadvantages—a preparation which he says, has proved valuable in curing cases of secondary syphilis which had previously resisted the beneficial action of iodine in all its usual combinations and forms—a preparation, moreover, which does not produce the evil effects of iodine in those constitutions with which that substance is known to disagree. The preparation or compound is named "liquor cinchonæ hydriodatus," and contains in one fluid drachm of liquor, twelve grains of cinchonæ flav., and one grain and a half of iodine, in the form of hydriodic acid. Of this, the dose varies from one to three drachms, from which Dr. C. has not found any of the evil effects arise which smaller doses of other preparations of iodine have been known to produce. While using this compound in some of the successful cases treated, he also employed the hot air bath, to which he attached much importance, in order to produce profuse sweating, and always with marked good effect. Indeed, he says he does not know a more potent remedy for intractable and inveterate cases of secondary syphilis than this is. This preparation is produced by exhausting the powdered bark with an aqueous solution of hydriodic acid; then with water; and the liquor is subsequently evaporated to the above bulk.—*Lancet.*

Removal of Tumors by a New Method.

"Dr. Simpson, of Edingburg, has been experimenting on the removal of tumors by a method novel in this country. He introduces a hollow acupuncture-needle, or very fine trocar, into their tissue, and injects a few drops of some irritant liquid—such as a solution of chloride of zinc, perchloride of iron, or creasote. The effect has been to destroy the vitality of the tumors so treated, and they have been separated by a process of enucleation. We have seen a somewhat similar plan adopted in Paris by M. Maisonneuve. He has slender stylets made of a paste composed of flour, water, and chloride of zinc. These are baked. A puncture is made in the tumor, the caustic style is inserted, broken off, and left. We saw several malignant tumors treated in this manner, and some cases in which a healthy granulating surface was left after the seperation of tumors which had been destroyed in this manner."—*Times and Gazette, Feb.* 7, 1857.

Iodide of Potassium in Scarlet Fever.

Dr. Charles E. Cady in a letter to the editor of the Philadelphia Medical and Surgical Journal, highly recommends the Iodide of Potasium in grain doses, repeated at intervals of two hours, in scarlet fever. He has employed it in over one hundred cases, with uniform success. It is worthy of a trial.—*St. Louis Med. and Surg. Journal.*

Houston, Texas. March 7th, 1857.

Physic Does Pay.

Messrs. Editors:—The assertion is so often made in plaintive tones by the desponding junior members of our profession, that "physic won't pay," I have long since determined to ferret out the reason for the sad wail. I have had my attention directed, with my hopes, to the race of M. D.'s who came upon the rough sea of public life at the time I donned the armor, and all the while have had Raphael's fear haunting my mind, a "fear that in life I might be surpassed." I then have watched closely the struggles of my compeers for supremacy, and oft-times have in great chagrin seen the veriest charlatan rear his head in derision at the the beautiful and harmonious laws of my much loved profession. I do not award to every *regular bred* physician equal praise, for with sorrow I acknowledge I have seen few men who fill the statue of a true physician. A true physician is a peculiar man, and God's noblest work—well deserving the rich encomiums passed on him by the savans of other days, while the usurper—the assassin merits the condemnation of both heaven and earth.

Why is it that unthinking men stigmatize our profession because of its not being a lucrative calling, and why is it that so many fail and discard it for the sake of gold?

If you will cast your eyes around and observe the barter in human blood —see the sacrilegious fiends prowling along the byways and alleys of our cities—insinuating themselves into even *the better circles* of society, laying their ruthless hands on the home circle to blight it with the besom of destruction; see this and learn the deep laid scheme, the lust for gold, and who would not be tempted to exclaim of the unthinking public, 'mene tekel upharsin."

But there is a higher law which should actuate the true devotee of medical science. He should not look to an unappreciative people for commendation—he should not expect to be hailed as a deity, or lauded as a prince, for yet, the world is illy fitted to comprehend the holy mission of a Doctor. Let him know himself—let him bear the impress—let him feel and know that he hath a power within, principles to govern, a nerve to execute his peculiar design in the great plan of universal good.

In this fast age, wealth is made the goal of life—men preach and pray for gold—steal and murder for gold, while men of principle who are prepared and willing to contend faithfully and honestly for position, are rarely met with and still more rarely succeed. Merit is forgotten "and dies amid her worshippers."

The chief aim of the young physicians of the United States is not to excel in doing good and in advancing medical science, but they spring into the arena, untutored, unlearned, and in a swarming host infest our land with their stupidity and knavery.

A few exceptions modestly peep out from the midst of chaos, to drag through a long probation, to leave a single foot print on the sands of time and die leaving the world but little wiser although a thought was born unto them.

Our profession should not be sought as a lucrative calling, and all those

who seek it as a trade, ought to be spurned from its portals. Such men bedraggle its escutcheon in the gore of their victims, contaminate its purity, bring obloquy apon the "divine art," and leave a blood mark on the page of history which is damning to the struggling science.

Where can the man be found who, deserving merit, has failed in our profession? Nowhere. To acknowledge a failure is to acknowledge a want in efficiency and competency. But many men succeed who merit contempt of the world. Grant it; but it is because worthy men are few—the supply being less than the demand.

Let the lovers of truth and science in our profession band themselves together and make it a business to expose the deadly schemes of empiricism, and prune our vineyards of all the cumbrous off-shoots which weigh down the vine and bear no grapes. The uneducated pretender should be uprooted and the money changers scurged out of the temple.

I should like very much to know what definition would apply to the word physician, in the United States. He is a protei-form animal of the composit style—every thing and nothing; a heterogeneous mass of compound incomprehensible inconsistencies. I wish every body would call me Mr., I am really ashamed of my title in many crowds I am caught in.

But how is physic to pay? In the first place, none should be received into the fold whose mental capacity is not beyond cavil. Second, on the mind of the novitiate, this first great lesson should be indelibly stamped, honorable medicine is devoted to the cause of suffering humanity and to God. Third, pecuniary emolument is not the object of life well spent, but it is a blessing which flows naturally as a consequence.

Let the young in the medical profession be properly imbued with the holiness of their mission—the fearfulness of the responsibility resting on them, and the absolute demand for ceaseless vigilance and constant devotion to the entrancing study of this strongly complicated human organism, and my word for it they will find no time left at night to spend over the card table or social glass, or in the day brooding o'er their failure in business. The habits of men, in a great degree, control their successes, and in no calling in this more applicable than in our profession. He who suffering from want of appreciation—want of business, and a consequent want of gold, can always find a hidden fault within himself—let him seek it there and no longer burthen the passing breeze with his sad wail of imaginary woe.

How strange it is that the qualifications of doctors are rarely questioned. Even in the minor affairs in life, efficiency is the desideratum, but men everywhere lay their bodies down at the disposal of any one sporting the *sobriquet* Doctor- Gentlemen by birth and education, expose their bodies and those of their wives and daughters to the contaminating touch of the vilest scoundrel in christendom, nor ask or care to know, from what cesspool he hails. Let any man from the humblest, aye, the most degraded walks in life don *the title* and seek a distant clime, and he can securely slay without molestation.

Who in our day stops the bloody charlatan to demand his diploma or question his competency? Men have grown grey and opulent in our pro-

fession, whose qualifications have never been gainsayed, when, were the truth known, they have slayed their thousands trying to find out what Hippocrates taught centuries ago. It is the duty of the young physician of this day to array and expose these vile usurpers, and by their acumen in scientific, honorable medicine, blast the upas which shades the lovely flower from a careless world. Physic will pay the honest, earnest devotee.

T. S. D.

P. S.—Although Homœopathy is laughed at, and hissed out of the better circles of society throughout the world, yet I find it still struggling for breath in this sunny clime. We hope to have the pleasure of seeing it kick its last this year. It is a burlesque on common sense and we are disposed to take the advice of your journal and not recognize its votaries either personally or professionally. D.

—*Nashville Journal of Medicine and Surgery.*

Esculapius the Son of Apollo.

It is said that the great Boerhaave was more proud of his success as a flutist than of his scientific glories- Haller, the universal genius, was an accomplished musician, and delighted in taking his part on the violoncello. Orfila, in place of becoming the founder of modern toxicology, had well-nigh turned his magnificent baritone voice to profit on the stage. M. Bataille, one of the most admired of the singers at the *Opera Comique*, is a doctor of medicine; and a young *agrege* of great promise, and possessed of a beautiful tenor voice, has deserted the Academies of Science for that of music. Quite lately too a Mr. Hans, a young man of twenty-one years of age, has made a promising *debut* in Lablache's character in Norma, at the *Theatre Italien*, and is engaged for the next season in London. He is the son of the celebrated Rokitansky, of Vienna.—*Ibid.*

Dr. Samuel Long, of Springfield, Ill., reports, in the March number of the Northwestern Medical Jonrnal, a case of ovariotomy, from which the patient entirely recovered in three weeks, without a single untoward symptom.

The Dark Side of War.

Colonel Tulloch, one of the two members of the Crimean Board of Inquiry (the other is Sir John McNeill) in a pamphlet recently published, states that the loss from sickness alone, during the winter of 1854–5, in the Crimean army (including what took place at Scutari and during the passage), amounted to thirty-nine per cent, in the infantry, and in eight corps actually amounted to seventy-three per cent.; this being exclusive of men killed in action. of who died of their wounds. By way of contrast it may be mentioned, that, in the naval brigade, which took a prominent part throughout the whole siege, the deaths from sickness were under four per cent. This terrible mortality was four times greater than that which occurred during

the Walcheren campaign, whose horrors aroused the indignation of the country, and produced a perfect storm in the Senate. Colonel Tullock in, eloquent language, points out the causes of this heartless loss of lives: "It was," he says, "no foeman's hand, no blast of pestilence, but from the slow though sure operation of disease, produced by means, most of which appeared capable, at least, of mitigation."—*North American Medico-Chirurgical Review.*

Voices differing with Localities.

Experience; says Fetis, has demonstrated that voices, like vineyards are, in general, distributed in France, by districts. Picardy furnishes finer basses and in greater number than any other province; and almost all the fine basses, which have shown at the opera, and in the other musical establishments, were from that province. Tenors, and particularly those which are called *high counters*, or counter-tenors, are to be met with in greater number in Languedoc, and especially in Toulouse and its environs, than in any other part of France. The voices of this kind in that country are of singular beauty, and the chance of preserving them after the change, is much more favorable than elsewhere. Lastly, in Burgundy and Franche-Comte, the female voices have more extent and a purer quality than in all the other provinces.

Agreeable Mode of Taking Senna.

Dr. Linthner says, that senna leaves (one or two drachms to one or two cups of water) should be allowed to infuse all night in cold water. With the strained infusion coffee is prepared next morning, as if with water; and an aperient which does not taste of senna and does not cause griping is thus produced.—*Buchner's Repert.*

Habitual Constipation.

Dr. Haughton says: "In obstinate cases of this kind you will find the following a very capital pill: half a drachm of extract of colocynth, and three grains of extract of nux vomica, made into twelve pills, one to be taken night and morning."—*St. Louis Med. Jour.*

Forthcoming Work.

We are glad to learn that the Philadelphia publishers, Messrs. Lippincott & Co., are about to issue a new work, entitled Surgical Cases by Paul F. Eve, M. D., Professor of Surgery in the University of Nashville. From the ability of the author, we anticipate a valuable work from his pen.—*St. Louis Med. Journal.*

Editorial and Miscellany.

Salutatory.—With the present number, the subscriber assumes joint proprietor-and editorship of the Medical Independent; and before retiring behind the editorial "we," he wishes, even at the risk of incurring the charge of egotism, to appear before the fraternity and his readers, in the first person singular.

From the sixth number, the Independent has been involved with a contemporary, in a controversy, which has partaken largely of a personal nature. This controversy has been regretted by many, including warm adherents of the journal and members of the profession at large, and has frequently prompted the inquiry, so often provoked on other occasions, "why *will* Doctors quarrel?"

The harmony of the legal profession, forensic as it is in its practice, is cited as presenting a striking contrast to the quarrelsome proclivities of our own. While, from my relation to both parties, I refrain from interference, I remark in reference to the general subject, that the answer and explanation lie patent upon the surface of facts presented in the contrast. From the nature of the practice, men destitute of ability and acquirement cannot rise in the legal profession. In whatever speciality the aspirant may engage, merit alone will advance him. The opinions of the counselor are to be tried by those of counsel enlisted in opposing interests. The persuasion and logic of the advocate, are met by their like. Legal opinions and logical deductions are to be weighed in the scales of impartial justice, and persuasive or peremptory eloquence in the influence it exerts, registers a just estimate of its force. Hence, in the law, men soon find their true level, and standing competitors feel themselves peers. Mutual respect, confidence and harmony are the natural results.

With the medical profession it is widely different. In practice, the acquirement and skill of competitors are not brought in contact. Medical practice is a broad field, in which truth and falsehood, education and ignorance, refinement and vulgarity, dignity and buffoonery are often competitors for patronage, and not infrequently the worse leading the better in the strife. The public are not capable of judging correctly the merits of medical doctrines, or always, of medical men; hence, the crudities of Thompsonianism, the absurd vagaries of homœopathy and the sorry delusions of spiritualism, with their unlettered and unstrung advocates, find patrons in all classes of society. Such being the case, it is not strange that in the ranks of legitimate medicine, where may be found men of almost every grade of endowment and acquirement, competitors should frequently chance to be

men unworthy, morally or mentally, of each other. Nor are the consequences more strange; distrust, jealousy and contempt naturally follow, and where these qualities prevail, bitterness soon reigns. Misunderstandings, misinterpretations and aversion to explanations are frequent, and thus when controversies arise, they are apt to assume a personal and bitter character.

In the existing state of the profession, such controversies are not altogether unproductive of good. To be deplored they certainly are, not alone from the attitude in which the public behold us, but also from the fact that they cultivate a spirit, which, from the peculiar nature of matters already explained, is but too prone to manifest itself. Still they are not destitute of good results. Entertaining these views, and perhaps, not deploring controversy as deeply as some of my medical brethren, I shall, notwithstanding, strive to avoid its tumult. I shall not be the aggressor in personalities, but will manifest, should occasion require, even a laudable forbearance in this respect, and trust that the hand thus fraternally extended, may meet with a response, prompted by fraternal hearts.

Books, writings, public teachings and existing evils are, I conceive, legitimate subjects of criticism, and in the discharge of editorial duties, I should deem myself highly culpable in shrinking from their full performance. Adopting as a motto, "full and exact justice to all men," I will zealously labor in the editorial field, for the true interests and progress of medicine.

Moses Gunn.

OUR EDITORIAL CHANGE.

We assume that the readers of the Independent will not expect to learn from its pages all the reasons which have prompted us to make an important change in its editorial supervision and proprietorship. It is the result of deliberate reflection, having in view the perfecting and permanency of an enterprise which though comparatively inceptive, has received from the profession distinguished favor and a liberal support.

We who gave origin to the journal, and have labored thus far to make it acceptable and profitable to our readers, congratulate ourselves and our subscribers upon a change which has secured the talent and energies of Professor Gunn. In bringing this accession to our forces, however, it is not proposed to make any radical change in the position and general policy which has been maintained. The journal will still be *indepedent* in the promulgation of truth, the vindication of medical science and its ethical observances, untrammelled by the local interests of cliques or combinations.

We shall labor zealously to make its pages, so far as possible, a medium for the dissemmination of *original practical truths*, and to this end have secured the services of a good number who will be recognized in our list of collaborators as writers of eminent ability and experience.

Our senior, Dr. Kane, who has represented for the most part the *review* department and contributed largely to the original communications, leaves the editorial chair to assume a relation which reflects no less honor, and will involve no abridgement of his valuable services, but will be more consistent with his professional labors. Under such auspices we confidently believe that our readers will concur with us in the opinion that the change will highly promote the interests of the journal and the advancement of medical science. R.

The Meeting at Nashville.—The last meeting of the National Medical Congress, though not large, was highly respectable, both in number and character, and was undoubtedly productive of as much good as any previous session. There was, it is true, a paucity of reports from the special committees, but that of Dr. Reese alone, was richly worth the trouble and expense attendant upon the meeting. There was a general prevalence of harmony, the only exception being in reference to a subject, which has, we believe heretofore constituted the only source of disagreement—medical schools. We shall allude to this subject hereafter. The election of Prof. Eve was most judicious; a clear voice, quickness of apprehension, promptness and correctness in decision, are qualities which render him a pleasing and expiditious presiding officer.

For ease of access, Nashville was perhaps an unfortunate location for the convention; but once there, the vexatious delays on the route, and the *practical* democracy experienced on Cumberland river steamers, were forgotton in the beauty of the city and surrounding country, and in the overflowing hospitality of its citizens. We cannot speak in terms sufficiently expressive of the latter theme, but we shall ever hereafter advise our friends to go to Nashville to learn hospitality. We are glad we went to Nashville. G.

The late vicar of Sheffield, the Rev. Dr. Sutton, once said to the late Mr. Peech, a Veterinary Surgeon: "Mr. Peech, how is it that you have not called upon me for your account?" "Oh," said Mr. Peech, "I never ask a *gentleman* for money." "Indeed," said the vicar, "then how do you get on if he don't pay?" "Why," replied Mr. Peech, "after a certain time I conclude that he is *not* a gentleman, and then I ask him!"—*Times & Gazette.*

Syphilization.—It seems that this idea, i. e. the cure of syphilis, by inoculation with syphlitic virus, is obtaining foothold in high places in some parts of continental Europe. Sperino at Turin, Gamberini at Bologna, Gulligo at Florence and Boeck, Professor of Medicine in the University of Norway, have all been experimenting largely since the rejection of this subject, by the French Academy of Medicine, on its announcement to that body, by its discoverer, Auzias Turenne. "As a prophylactic" its adoption is deemed "unjustifiable" but its curative powers are recognized by these experimenters. The British and Foreign Medico-Chirurgical Review analyzes two works by Dr. Boeck, *Clinical Observations on Syphilization*, and *Syphilization of Children*, from which we gather that while Dr. B. will not recognize its claims as a prophylactic, he feels "justified in trying a new method of treatment, which has had reported success, even though its operation may be inexplicable, and its adoption seem in contradiction to common sense." He deems it contra-indicated in the primary, and though he does not think applicable to all forms of the constitutional disease, he arrives at the following conclusions, from eighty-four cases, treated by syphilization up to March, 1856.

"I. That in all cases, without exception, immunity to the venereal virus is obtained sooner or later by inoculation with this poison.

II. That the symptoms of syphilis present at the commencement of syphilization disappear during the employment of this mode of treatment.

III. That the general health does not suffer in the least from syphilization—on the contrary, if the patient has been in weak health before inoculation, he most materially improves in strength and appearance during the process."

When, three or four years since, we first heard syphilization advanced as a prophylactic and curative means, we said, what next! We now repeat the exclamation, what next !! G.

DR. PALMER'S LETTER.

In obedience to the demand of Dr. Palmer, in the Peninsular for May, we present *the whole* of the letter from which we have heretofore only made extracts. There are portions of it which we would gladly suppress, but inasmuch as he has thus publicly made the demand, we feel compelled to yield, notwithstanding it contains complimentary notices of us, which our modesty would prefer to leave unpublished; lest we should again be accused of garbling, we, at the expense of private feeling, publish the whole letter, with the hope that Dr. P. will be satisfied with its entiety.

We have but a few words to say with regard to our reasons for alluding to the letter in the first instance. We had no other means of refuting Dr. P.'s statements respecting the rejection of the paper offered upon the subject of "biography of *living* medical men." He had given a false coloring to his expressed views of the article in question, and appealed to Dr. Davis and Dr. Butler in behalf of his position. Therefore we made a few quotations from the letter merely to show that Dr. P. practically endorsed the views which we had presented and that his chief reason for rejecting it was on the ground of a personal controversy with Dr. Davis at the time. We made only such extracts from the letter as had particular bearing upon the point at issue.

In calling for the letter therefore, Dr. Palmer is alone responsible for the publicity of whatever else it contains of a personal character, and his *real* motives in calling for the whole letter can be best understood and appreciated by those most interested.

For the sake of our readers we hope that Dr. P. will not compel us to recur to this subject again. R.

CHICAGO, Nov. 5th, 1855.

L. G. ROBINSON, M. D.,

DEAR SIR:—Your note of the 3d inst., and the article referred to in it were received to day, and I take an early opportunity to reply according to your request. Editors are very often placed in very delicate situations—a fact which you may not fully realize until you feel the responsibilities of such a situation by actual experience and in making up your judgment of our conduct I hope you will exercise the proper charity.

You ask my opinion of your article. I think it well written in a clear agreeable style—the different points are well taken and sustained. I regard it a decidedly *readable* article, and there is much force in its views. There are however different opinions respecting the propriety of presenting before the public biographical sketches of living individuals, who have succeeded in attracting the attention of considerable portions of men; Greely, Bennett and Barnum have each a volume devoted to their particulars and most persons see no particular impropriety in the affairs. These men have achieved notoriety with the community generally and the community seem gratified in reading their lives. A history of the American Medical Association has been written—it has honored Presidents. Those thus honored have by that fact, if by nothing else, obtained a degree of prominence and notoriety with the profession, and judgiug from the expressions in the Medical Journals of the country, the profession generally have

been gratified by reading their brief biographies. So at least Dr. Butler judged they would be as evidenced by his procuring those sketches. Dr. Davis wrote the history in question, and was largely engaged in originating the association, is in fact regarded as its founder, and in this way he has obtained notoriety with the profession. No man of his age in the profession in this country—favorably or unfavorably, is more extensively known. It is true, his disregard of conventionalities and evidence of defective early education, literary and social, rendered him an object of merriment with some in the early part of his career, but by the force of his own talents and industry—he has made his way to the respect of nearly all, and to the admiration of many of the profession. It has been judged by some at least, whose judgments are not entirely to be despised, that it is befitting that the curiosity of the profession should be gratified by a biographical sketch of him. As I already intimated, there are differences of opinion on the general subject of such biographies; many I presume, very many think and feel with you as expressed in the article, others think and feel differently. Many would regard your article as just and deserved, others would consider it as an uncalled for personal traduction. Should it appear in the Peninsular Journal, its editors, and particularly Dr. Pitcher and myself, would bear its responsibility. Now, we must be allowed to say whether we will or not bear that responsibility, and in looking over the whole matter, we think it not best for the interests of the journal—our own interests, the good, the peace and honor of the profession, to take such a stand I hope you will permit us without censure, or the questioning of the correctness of our motives, to decline doing so. So much for the general view of the subject. Now, for my own part, I am very much inclined to your views of these autobiographies, for they very nearly amount to that. The case you have cited as an illustration of your views (I mean the biographical sketch) is one got up I think with bad taste—many may not think so however—but if you were editing a medical journal and were disposed to express your views to the profession, it would be highly proper for you to do so, as presenting one aspect of the subject, and there cannot be the least objection to any journal publishing it that chooses to do so. Now, for our own case: I would not consent to have anything go into our journal when its senior editor had expressed an opinion decidedly against it. He is the older man, must take the leading responsibility, and must be supposed best qualified to judge of what is becoming. In the next place, were it left to me alone, without any expression from him or any one else, under our peculiar circumstances, I should decline to publish it. I should do this principally on the ground of our recent collision

with Dr. Davis. It would be said and believed that this article was the offspring of that difficulty, and that we had resorted to this side issue to wound our antagonist. It is true Dr. D. seemed inclined in his article to wound me all he could, but I am unwilling to *appear* to retaliate in this manner. Besides the article appearing in our journal at this time *would lose much of its general force.* It would be regarded as an attack upon an individual rather than the resisting of a general evil. These would be my reasons for declining it at least at present, and preferring if it appeared at all, that it should appear somewhere else. In my collision with Dr. D. in our journals I feel that I have sufficient advantage in the strength of my positions and the weakness into which his passions betrayed him; and if the contest goes on I shall choose to adhere to the issues already existing, or which he may hereafter make. I can conceive of a contingency in the future which would render me desirous of publishing the article either as original or as a selection, but according to my sense of propriety the time is not now. I hope you will see sufficient motives for declining to publish, and further that you will not regard these motives as improper. I have written thus at length because I wish you to understand me fully. The Peninsular Journal we intend shall be independent and out-spoken. It has heretofore shown no particular disposition to shrink from issues presented, and while we hope a proper prudence will be preserved, we hope timidity will not be among its qualities. We shall be very glad to have you write something else for us. Taking this article as a specimen of your style, you could not write an article on any strictly medical subject that would not be highly acceptable—or indeed upon any subject which had not mixed up with it some personal bearing or affair.

Very sincerely yours,

A. B. Palmer.

Malpractice.—In New York, Mr. Courtney sued Dr. Henderson, for damages done to his eyes. The defendant's counsel raised several points, but it is sufficient to state the second one—"that an error in judgment is not malpractice." The court held this to be good law when applied to a man skilled in anatomy, surgery, or physic, but that it had no application in this case; that the defendant, knowing nothing of anatomy, surgery, or physic, could have no judgment in the matter. The law contemplated a judgment founded upon skill and knowledge in these sciences. That man who would hold a diploma without any knowledge of these sciences, and under such false pretenses obtain a patient, and commence tinkering with the most delicate of

organs, the eye, must be reckless indeed. An error in judgment of a man skilled in a particular calling is not malpractice, unless it is a gross error. A person attempting to practice in physic or surgery, without first having obtained a knowledge of such science, is liable for all the damage that is the result of his practice. The case was given to the jury, who returned a verdict of five hundred dollars for plaintiff.—*Phil. Med. and Sur. Journal.*

All honor to the enlightened expounder of the law, who made this wise and rational distinction. It is founded on plain, sound, common sense; so plain and forcible, that nice powers of discrimination are not required to see the point; yet it is directly at variance with the general spirit of legislation on this subject, for the last twenty years. Legislators have seemed to think that all laws regulating the practice of medicine, were for the protection of the profession and not the public, and regarding the profession as a monopoly, they have thrown open wide the doors for the admission of each and every one, who chose to enter and assume the most responsible of all relations. Thus the people, who should have been protected by judicious legislation, have been left to the mercy of ignorant pretenders. So unlike the spirit of past enactments, and so opportune is this wise decision, that it brings refreshing hopes of better things. Perhaps, at the hands of those learned in the law, the medical profession may yet receive that honor, and the public that protection, which legislators have denied them.

G.

☞ The proceedings of the American Medical Association have crowded out some of our Book Notices, and other original communications, which will appear in our next. number.

From the Nashville Journal of Medicine.

AMERICAN MEDICAL ASSOCIATION.

TENTH ANNUAL SESSION.

NASHVILLE, May 5, 1857.

The Association met at 11 o'clock, in the Representative Hall of the State Capitol, the President, Dr. Zina Pitcher, of Michigan, in the chair, and upon his right Dr. W. K. Bowling, of Tennessee, one of the Vice Presidents. Dr. Wm. Brodie, of Michigan, and Dr. R. C. Foster, of Nashville, Secretaries, were present.

The meeting having been duly organized, the first business in order was stated by the Chair, to be the reception of the report of the Committee of arrangements.

Dr. C. K. Winston, chairman of the Committee of Arrangements,

on behalf of the committee and of the medical profession of the city generally, extended a sincere and cordial welcome to the members of the Association, in a few pertinent and appropriate remarks, as follows:

Mr. President and Gentlemen of the American Medical Association:

This, I believe, is the tenth annual meeting of this Association. As chairman of the committee of arrangements and reception, I am charged with the agreeable duty of welcoming you to the State of Tennessee and the city of Nashville. I only regret that I have not language to express this sentiment with sufficient cordiality. I only add, gentlemen, in common phrase, "You are more than welcome."

You are the representatives of a profession, distinguished alike for its antiquity, its scientific attainments, and its usefulness. It constitutes the true link between science and philanthropy—science and philanthropy, moral, intellectual, and physical. You come from every portion of this glorious Republic—from the Kenebec to the Rio Grande—from orange groves and golden sands, from mountains clad in eternal snow, and valleys smiling in perpetual verdure. You come not for purposes of self-aggrandisement or personal ambition, nor yet to advance the schemes of parties or stir up the antipathies of sections. "You know no North, no South, no East, no West;" but you come as a company of philanthropists, a band of brethren, that you may pour the acquisitions of another year into a common treasury, kneel side by side at a common altar, and drink the living water as it gushes from a common fountain. You have come to maintain the dignity, to elevate the ensign of a profession, to which you have devoted your lives, and to which you have linked your fortunes.

You are the cultivators of a profession eminently progressive, and admitting to the fullest extent the spirit and genius of enterprise. So much may not be so fully said of others. Who could expect, at this or any other day, to embellish the commentaries of Blackstone, or improve the pleadings of Chitty, or repoise the scales of justice? Where are the men with commissions never so divine who would attempt to recast the logic which made Felix tremble, or adorn the doctrine of justification by faith? Who hopes now to shed additional light on the pathway to the skies, or sing in strains more immortal, the triumphs of the cross? Not so with Medicine. Yours is a rising orb, magnificent in its proportions—while others have reached the Zenith, yours has but begun to mount the heavens—while others have begun to fade, yours knows no eclipse, nor decline. You revere the names of Hipocrates and Sydenham, of Brown and Cullen, with a host of others; you treasure up their maxims, and admire the genius with which they struck out new truths, but you acknowledge no master, you fall down at the feet of no *Gamaliel.* You have come to the day of free thought, of free investigation, and free speech. You call in question the most hoary, as well as the most recent fact, and you are daily revealing, in floods of light, principles hid from the foundation of the world.

You are eminently the students of nature. While others may be led along dubious paths by mortal pedagogues, your teacher dwells in the realms of eternal light and guides with hand unseen and unerring to essences and first causes. The formative chrystal and germinal dot are alike transparent before you. You are taught the mysteries of the living principle; the scalpel and retort are your companions, while you revel in the wonders of the microscopic world. You understand, somewhat, the laws by which a mote or a mountain is formed, a monad or a man is made. The spear of grass which lifts its head in the distant solitude, the lordly

oak and imperial cedar, instruct you, while air. and earth, and sea, with the creeping multitude, yield treasures at your command.

You are the veterans of a thousand battle fields, not of mortal strife where man meets man in sanguinary conflict; but where a secret and impalpable foe—a tyrant who has reigned from Adam until now—disposes his secret forces and directs their deadly shafts. When others have turned back affrighted and aghast, you, single handed and alone, have met "the pestilence which walketh in darkness," and the destruction "which wasteth at noonday," despoiled them of "the armor wherein they trusted," and have driven them ignominious, from the field.

Were the victories which you have won, the conquests which you have achieved known, you would be crowned with laurels more unfading than those which entwined the brows of Greek or Roman conquerors.

But more and better than all, you are the lovers of your race, the friends of humanity. Scattered about all over this happy land, you emphatically "go about doing good." Your hearts beat in unison with human woe—your ears are open to the cry of distress, whether it come from hovel or palace—you "wipe away the orphan's tear and cause the widow's heart to sing for joy,"—upon your heads daily descend "the blessings of those who were ready to perish."

To such a body of men thus actuated, thus coming, we extend a cordial welcome. We feel honored by your presence, and expect to be improved and elevated by your intercourse. We throw wide our doors and invite you to the hospitalities of our homes, and to the kinder affections of our hearts.

Dr. Winston then proposed that the roll of delegates, who had registered their names, should be read. The roll having been called, it appeared that twenty States were represented.

Upon the suggestion of Dr. C. K. Winston, our venerable fellow citizens, Drs. Felix Robertson, John Shelby, and James Overton were made permanent members of the Association.

The following list comprises the names of all delegates, permanent members, and members by invitation in attendance during the session:

Connecticut.—Charles Hooker.

New Hampshire.—Adoniram Smalley.

New York.—James R. Wood, D. M. Reese, Geo. N. Burwell, Alden March, Samuel St. John,

New Jersey.—Richard M. Cooper.

Pennsylvania.—R. Dunglison, B. F. Schneck, Casper Wistar, P. Cassidy.

Georgia.—Henry F, Campbell, C. R. Walton, N. F. Powers, A. H. Means, Josoph P. Logan, M. H. Oliver, Thomas S. Powell, J. Gordon Howard, R. D. Arnold, Geo. P. Padleford, Pike Brown, Jesse Boring.

Alabama.—C. M. Merriweather, W. P. Reese, A. F. Allexander, S. W. Clanton, W. H. Thornton, P. C. Winn, T. Stith Malone, W. J. Bass, G. D. Norris, J. F. Sowell, J. W. Morris.

Tennessee.—Frank A. Ramsey, James Rodgers, R. O. Currey, B. B. Lenoir, J. L. C. Johnston, J. M. Boyd, Geo R. Grant, T. A.

Atchison, S. S, Mayfield, J. D. Kelley, T. L. Maddin, J. D. Winston, J. E. Manlove, G. A. J. Mayfield, Richard Owen, W. P. Jones. J. P. Ford, Robert C. Foster, Jno. H. Callender, Jno. H. Morton, A. H. Buchanan, James W. Hoyt, N. C. Perkins, J. Berrien Lindsley, C. K. Winston, Paul F. Eve, W. P. Moore, Milo Smith, Wallace Estill, B. W. Avent, H. H. Clayton, H. M. Whitaker, H. B. Malone, T. M. Woodson, A. B. Ewing, Robert Martin, W. K. Bowling, P. S. Woodward, R. F. Evans, Thomas Lipscomb, M. Ransom, J. A. Long, Jno. M. Watson, W. D. Haggard, Jno. S. Parke, D. B. Cliff, T. G. Kennedy, T. R. Jennings, Ira Conwell, J. S. Burford, W. H. Childress, W. A. Cheatham, J. F. Towns, J. M. Brannock, B. O. Jillson, P. W. Davis, G. F. Smith, W. D. Senter, J. W. McNutt, R. G. P. White, J. P. Epperson, S. L. Wharton, T. C. Murrel.

Louisiana.—S. O. Scruggs. Robert A. New, Cornelius Beard, E. D. Fenner.

Kentucky.—Samuel Annan, R. W. Gaines, J. B. Flint, J. W. Singleton, R. J. Breckenridge, S. C. Porter, W. S. Chipley, S. M. Bemiss, L. G. Ray, W. A. Atchinson, E. G. Davis, L. E. Almon, Jon. T. Fleming, C. P. Mattingby, D. W. Yandell.

Indiana.—W. H. Byford, W. W. Hitt, Isaac Mendenhall, T. Bullard, N. Johnson.

Illinois.—J. C. H. Hobbs, A. H. Luce, James M. Steel, E. K. Crothers, T. K. Edmiston, W. A. Hillsi.

Missouri.—S. Pollak, E. S. Fraser, Jno. S. Moore, C. A. Pope.

Michigan.—A. B. Palmer, L. G. Robinson, Zina Pitcher, W. Brodie, L. H. Cobb, M. Gunn, Lewis Davenport.

Iowa.—Asa Horr, Wm. Watson, D. L. McGugin, J. C. Hughes.

Ohio.—Henry F. Koehne, J. Mosgrove, B. S. Browne, D. Ferris, A. W. Munson.

Wisconsin.—Hays McKinley, J. K. Bartlett.

South Carolina.—E. R. Henderson, M. S. Moore. R. W. Gibbs, R. S. Bailey.

Mississippi.—F. B. Shuford, J. S. Cain, J. T. Lowe.

Arkansas.—F. Grundy McGavock.

The President then stated that it was customary to take a recess of fifteen minutes in order that the different State Delegations might appoint a member to serve on the Committee on Nominations, and the Association took a recess accordingly for that purpose.

At the expiration of the recess the Association was called to order, and the State Delegations then reported their choice respectively of delegates to serve on the Nominating Committee, which was constitu ted as follows :

Connecticut, Chas. Hooker; New Hampshire, A. Smalley ; Indiana,

W. W. Hitt; Wisconsin, J. K. Bartlett; New York, Jas. R. Wood; Michigan, A. B. Palmer; Missouri, J. S. Moore; Illinois, T. K. Edmiston; Kentucky, R. J. Breckinridge; Arkansas, F. G. McGavock; Ohio, B. S. Brown; South Carolina, R. W. Gibbs; Alabama, W. P. Reese; Mississippi, F. B. Shuford; New Jersey, R. M. Cooper; Louisiana, S. O. Scruggs; Pennsylvania, P. Cassidy; Georgia, Thos. S. Powell; Tennessee, J. B. Lindsley; Iowa, Asa Horr.

On motion of Dr. Hooker, of Connecticut, it was resolved that the President, Dr. Pitcher, be now requested to deliver his annual address.

Address of Zina Pitcher, M. D. *President of the American Medical Association. Delivered on the occasion of the Meeting of the Association in Nashville, May 5th*, 1857.

Assembled as we are here, under the auspices of the medical profession in Tennessee: meeting in presence of the citizens of this beautiful city, honored by representatives from that better part of our creation, who, like the Amarnt of Milton, throw their shadows and shed their fragrance o'er the waters of the fount of life; coming as we have in considerable numbers from distant portions of the United States, abandoning for the time being our private engagements, and encountering on our way hither the hazzards incident to velocity in locomotion, as if only to enjoy the social amenities and the pleasures of professional re-union, these two questions naturally arise in the minds of those who are merely witnesses of the spectacle presented by our assemblage. "For what purpose is this convocation of physicians? What is there in the nature of their particular pursuit which prompts them thus to relinquish its rewards, to forego the endearments of home, when there is no visible manifestations on their part, of a design to promote those objects which center in self-interest, to advance the purposes of sectarian ambition or political partisanship?"

In the fulfilment of a duty incident to the position which I have had the honor to hold for the past year, a year full of pleasant recollections to myself, I shall, whilst designing in brevity to follow the example of my honored predecessors, attempt an explanation of the phenomenon we may be supposed to present to the mind of an intelligent, but uninitiated observer.

Before entering upon the task I have assigned to myself, I beg you to indulge me one moment, in repeating to the Association my assurances of gratitude for the distinction I have received at its hands, and for the personal manifestations of confidence and the acts of courtesy I have received from many of the individual members, the recollections of which will linger in my memory and lessen the conciousness of my weight of years, on the remainder of my journey down the declivity of life.

The objects for which the Association was formed will ever enlist my warmest sympathies and command my active co-opperation. I congratulate you on the happy circumstances by which this anniversary meeting is attended, on the evidences of vigor and the promises

of longevity which this Association derives from its annual migrations. God grant its existence may be prolonged by these annual renewals of its vitality, so long as there are evils for it to reform, or works of beneficence for it to accomplish.

To do what I have proposed satisfactorily to myself, would involve the necessity of showing the relation which medicine has held to the civil authority, to the ecclesiastical power and to the social condition of the people for all time antecedent to the date of this organization. This review would also lead us to consider the relation which free governments bear to letters, to science and the arts; a field too large for us to occupy on the present occasion. We shall endeavor, without attempting all this, to present to your view the condition of the profession at the time this organization sprang out of the antecedent chaos, the cause or causes of that condition; whether inherent and incurable, or whether arising from intrinsic circumstances, which may be remidied. and whether this remedy is to be found in public authority, or sought for in associated professional influence.

We remark first that a great and notable law marks and governs all the works of creation. It is typified in the individual mind—in our corporeal functions—in the movements of the race—and in the revolutions of the heavenly hosts.—all are subject to this law of periodecity, and this alteration of condition manifests itself even in the domain of disease. We have seasons of activity and repose in the natural as in the moral world; periods of illumination and obscurity—of activity and of rest: in the one case, producing day and night, winter and summer, and in the other, those alternations of social condition which have been spoken of as the Athenian age, the age of darkness. literally a long and profound intellectual eclipse, to which has succeeded the active era of mental excitement and of material progress in which we live, by which we are moved, the sun of which appears not yet to have reached its point of culmination.

In all the struggles which have marked the conflict between truth and error, ignorance and knowledge, medicine has always taken a conspicuous part, having ever been a faithful auxiliary, when not a leading element in every effort made to elevate and improve the condition of mankind at one time allied to sacerdotal authority, as an indweller of temples, and at another, incorporated into the body politic, or rather engrafted upon the tree of State.

In the earlier stages of civil advancement, in all those territories once composing the eastern and western empires, as is the case now in Europe, where certain forms of government exist, the sovereign authority prescribed the modes of worship, the forms of law and the requirements of medical practitioners. Unless the vigorous conservatism of these existing European governments is relaxed by the caprice of vain and foolish princes, at the suggestion of wicked men or misguided women, the right to exercise the functions of the physician is only conferred on the most satisfactory proof of indefatigable culture. And in the earlier pages of our own national history, we find the footprints of our European ancestors in the records of those salutary laws made for similar purposes, and transmitted to us by our political progenitors.

But in the process of time, when our form of government was changed, when the repository of sovereignty become inverted, when the power of the State passed from the few to the many, when the State became nothing and the citizens all in all, when this segregation of the sovereign power was rendered complete by the absolute freedom of the elective franchise in many of the States, then our art ceased to have a party in the commonwealth, as the law which became the exponent of this new opinion, the expression of the popular intelligence, effaced from the public record all legal traces of distinction between the physician and the hypocritical pretender.

When these ancient legal incentives to study were withdrawn, a new class of men, unprepared by mental discipline, rushed into the professional arena, bearing down by their numerical force the few remaining barriers which society was disposed to defend, notwithstanding the abrogation of law.

The political revolution which separated the American colonies from the British crown, by loosening the connection between the Church and the State, insensibly led the way to the more complete separation of medicine from governmental control and political dependence. These manifestations of popular absolutism, which swept away the prerogatives of the clerical and medical professions, threatening to involve the law in the same uncharitable equality, were the remote causes of the professional abasement we had then reached, a humiliating consciousness of which aroused its members, who in the hope of reinstating its departed dignity formed this Association.

Whatever effect this unrestricted distribution of political power through all ranks of society, may have had upon the social body, it is not our business to enquire, as ours is not a political institution, but of its immediate influence in reducing medicine to a state of degradation, there is no reason for doubting the fact nor the propriety of this exposition, for with physicians, etiology is often a key to diagnosis, and without a true pathology, there is neither safety nor certainty in the therapeutics.

In treating of medicine in its social and political relations, it is not my design, as I have no wish, even if the power were inherent, to change our organization, or to advise an essential departure from our plans of operation. I have presented the subject in this light more for the purpose of reviving the courage of members who may have begun to despair of success, because the objects we set out to accomplish, have not been at once achieved.

Time must be given for results to mature, as all social institutions are of slow growth. Those who clothe and feed the members of them, must become imbibed with a sense of their importance and necessity for their advancement, as a means of promoting the public good, else their co-operation cannot be secure. Hence our duty of endeavoring to move the social body and all its dependencies, like the horses of a Grecian Chariot all abreast, striving at the same time to shield ourselves against the propensity inseparable from the absolutism of a pure democracy, to decapitate every object that raises its head above the surrounding social level.

We have stated with philosophical accuracy, but perhaps not with strict regard to literal historic truth, that this Association was formed to repair the evils resulting from the dissevered relation of medicine to the State authority. Whatever formula we use in expressing the idea, or by whatever rationale we explain our conception of the evils said to exist, for which it was designed to furnish the remedy, the records show that its mission was to reform the medical schools of the United States, and to improve the preparatory education of students of medicine.

The development of organic bodies depends upon the absorption and assimilation of extraneous materials. If the same law regulates the growth of institutions, it becomes a matter of some interest to inquire whether the schools are an out-growth of the profession, or whether the profession is the product of the schools, for in either case, there is a labor for us to perform, and the answer to this question determines the place of beginning.

Lest a doubt might arise as to the correctness of the opinion, we wish to impress upon the professional mind, that society itself, and not we alone, are amenable to censure for the abasement to which the profession of medicine had descended at the date of our associated existence, let us for a moment look into the records of the past, to see whether we cannot find an antecedent era, in which the world has been subjected to similar moral cataclysms, by which ancient institutions were broken up, their materials converted into drift, to lay the foundations of newer and more horizontal strata, from which we may draw lessons of wisdom applicable to our own time and our own condition.

We believe that there is no period of ancient history into which that of our art is intimately interwoven, presenting more analogies to our own, and at the same time, so distinctly marked by strong antithesis, as that which intervened between the death of the Saviour and Mohammed, when for more than five hundred years, a mighty struggle was going on between that Divine word, "who lighteth every man which cometh into the world," the spirit of the Indian religion and the majesty of the Roman Empire, the latter aided by a fascinating philosophy, made beautiful by the æsthetics of Longinus, each striving for the possession of the human race.

Whilst the Empire thus labored to throw its Upas shadow over the infant church, a social disintegration of castes, owing to these struggles and the irruption of barbarian hosts from the north, took place, and a consequent universal fusion of the races, languages and customs, producing an excitation of thought, and a blending of people analogous to the social fusion and the blending of types of disease, which we see daily taking place in our own time and in our country. The minds of men thus cut loose from their ancient fastenings, sought new affinities, arranged themselves in accordance with those difficulties into new forms, many of whom wandered into unexplored paths, hoping without the aid of a Divine guide to ascertain their relation to the unseen.

Thus also did the members of our own profession wander into untried and forbidden paths, in pursuit of the ideal, up to the time this Association was formed. A faithful picture of the last century of this

historic period, presents the deepest contrasts of light and shadow that can be portrayed in a single work of art. The darkest hue of vice being drawn in the same pannel with the purest tints of virtue. The church, young and vigorous, being soiled by its contact with a paganism inexpressibly wicked, against which it waged a war, unmitigated by acts of mercy.

These outbreaks of emancipated human thought at each of these epochs have had their use: have produced their fruits—late in arriving at maturity it is true—and especially so will it be with the germs that are scattered in the midst of the confusion of our own times. 'An abiding faith, that good seed, in spite of the tares that may choke it, or the birds that may devour it by the wayside, will spring up and produce fruit in good season, has led me into this historical retrospect.

During the period to which we have alluded just sufficiently to show what forces disturbed and broke up ancient civilization, we find on closer examination, that the laws of the Empire relating to medicine, though unrepealed, were not enforced.

These laws made it the duty of the provincial governors to send the youth, subject to their jurisdiction, up to the city magistrates, where they were required to submit to the most rigid system of surveillance by the municipal authorities, their conduct as students, their deportment as citizens, being subjects of official scrutiny. The medical pupils under the training of the Archiatres, or State physicians, were fitted for the performance of their duties in either the wards of the cities or in towns or villages, whither they were sent by imperial authority, on the requisition of the inhabitants, who paid for their services at a stipu lated price.

Notwithstanding these requirements of law were left unrepealed, the new opinions which had got possession of the popular mind, being more powerful than statutes, when inforced by the Perabolani, a body of religious medical enthusiasts, and various other pretenders, who, impelled by the spirit which animates a people having just been taught to exercise the privilege of judging in matters of faith, became presumptuous in matters of science, and applying this newly acquired right of action to medicine, having numerical strength, they overrode the prerogatives of caste, and trampled under foot the wisdom of all preceding ages.

Whilst these conflicts of opinion were being carried on in an age that produced an Athanasius, a Jerome, a Chrysostom, and an Augustine, and a system of Christian ethics which absorbed into itself all that was valuable in the philosophies of Greece and Egypt, medicine acquired celebrity from such names as Cæsarius, who became an Archiater—Palatinus, Oribasius, whose works remain as monuments

of his genius and proofs of his culture; Actius, Alexander of Tralles, and Paulus Eguineta, scarcely inferior in reputation to the father of medicine himself. The lustre of these names seems but the more expressively to mark the twilight of that night destined thence to brood over Europe, whilst the materials of the ancient civilization, broken into fragments by a rude and vigorous barbarism, were slowly wearing away the chasacteristics of the conquering hordes, and preparing the way for its reappearance in new forms, through the instrumentality of the Free Cities and the feudal institutions of Europe.

During this general eclipse of letters, its occultation continuing till the art of printing was invented, we have had furnished to us an opportunity of seeing how inadequate statutes alone are to the development of institutions, and how impotent they are, even when aided by professional co-operation, to resist the obstaeles interposed by an adverse public opinion.

If our design has been accomplished, we have shown that the work of medical regeneration is to be commenced by the profession, whose success is made dependent upon an intelligent concurrence of the popular judgment. But it must be remembered, that in attempting to bring about essential changes in social life, in public policy, or in the constitutional relations of the different States, by whose happy form of union we are permitted to meet here to-day as fellow citizens of a common country, we must keep in mind this fact, that all organic nature is developed from embryonic existences—that all great changes in opinion have had their origin in germs, planted long anteeedent to the production of fruit, and that advances in science and improvements in the method of its application to art, have also had their seed time, their period of growth, and must ever have their day of fruition.

History is filled with exemplifications of the truth of this remark, and of evidences of the perpetuity of this law. The first step on the road to the trans-Atlantic Telegraph was taken by Volta, when he constructed the Voltaic pile—the next was the formation of the Galvanic Battery. These inventions were followed by the discovery that soft iron becomes a magnet when subjected to the action of an electrical current, and resumed its normal condition as soon as the current was withdrawn. Then it was proved that the magnetic action of a current of electricity is not lessened in intensity by passing through a long wire. Out of these antecedents, by the help of Grove's permanent battery, the Magnetic Telegraph was developed and the art of magnetic printing evolved.

But for the researches of Vesalius, who had traced out the course of the lacteals, and splendid discovery of Harvey the circulation of the blood might have been a long time postponed.

Notwithstanding the perennial influence of those causes to which we have ascribed the tendency to professional abasement, we have met here to arrest and to counteract, there is in the condition of things by which we are surrounded, much to inspire us with confidence and to stimulate us to exertion.

We have not now, as did those who lived in the time of our historic analogue, to resist the pressure caused by the debris of an effete culture.

We have not to contend against the influence of those monstrous forms of superstition which grew out of the conjunction of Christianity, when defiled by a co-partnership with the civil power, and the decaying institution of its Pagan predecessor, when a phase of credulity was developed which would prescribe the contents of a mummy case, in preference to the kreasote involved in the process of the manufacture of mummy, ooce an article of Egyptian commerce.

Those political causes to which we have alluded as tending to diminish the distance between our pre-existing social extremes, whereby the medical profession lost its claim to legislative protection, have already produced the signs of a growing national homogenity, by fusing and re-casting into an American mould the various elements of which the nation is composed.

Among these materials, so readily amalgamated, which by their youth, energy and plasticity, give us our national character and national manners, there are some which need to be brought under the hammer of the forge, as well as the heat of the furnace, before they can be welded into the social mass. I alluded to a class of men, wearing ecclesiastical habiliments, not wise enough to comprehend that the professions are the growths of civilization, developed by the wants and necessities ef society, each one having its part to act in the drama of life, nor possessing that degree of self-respect, which would prompt a man, not even claiming to be divinely called, to avoid the contact of things proclaimed to be unclean.

When I speak of this class I do not mean the great body of American clergy—men who, instead of practising a heterodox medicine, both practice and preach the precepts of their Divine Master as things which appertain to man's social and everlasting peace. But I mean a class, who, as if bitten by some moral Tarantula, become blinded by a phrenitic distemper, and like the great adversary of the Philistines, are ready to pull down the pillars of the temple, regardless of the ruin impending, whether the ruin involve a simple social element or the integrity of the national fabric.

Having, then, in our favor the vigor and impressibility of a new people, the resources of a new and rapidly developed country, the

intelligence of a self-governing population, the augmentations of that intelligence by the unrestricted importations of learned works and the immigration of cultivated strangers, and the propulsion derived from a free and active press, we have a right to expect success. With such auxilaries, by a persistent assiduity on our part, we shall at some future day enjoy the happiness of seeing our labors crowned with the pageant of brilliant triumph.

The one thing already achieved, in the adoption and enforcement of the code of medical ethics, is worthy of commemoration by the observance of an annual holiday. Till then we have suffered more from quackery within the profession than from irregularities without. Now that order of things is reversed.

From a survey, even of the surface of society, we learn how soon the knowledge derived from medical sources strikes its roots into the popular soil. Take as example the subject of organic chemistry. and we shall see how rapidly its principles are passing into the stock of general intelligence. The numbers are daily on the increase, in every community, of those persons who know the necessity of nitrogenous articles of diet when repairs are to be made in the fibrous and areolar tissue, and how important an agency the carbo hydrogenous are supposed to exert, by increasing combustion in the removal of certain morbid conditions of the lungs. In this way the mutual relations of the profession to the people is made apparent. The instruction communicated by the scientific physician is refunded to him in the increased capacity of the people to appreciate his worth.

We have spoken of the professions as the products of a general culture, to which, in our country, they must of necessity bear a fixed and definite relation, and of the reciprocal influences they and the society out of which they spring, exert upon each other. We have shown in a single example by what apparently simple quotations in scientific discovery, men are led to great practical results. As an incentive to industry, and as a reason for confidence in slow but certain success, we will detain you one moment longer, in a hasty sketch of the field of nature. such a scene being as suggestive of thought and as full of instruction, as the examples furnished by the achievements of art.

In adjusting our telescope, to study the features of some snow-clad mountain, the organ of vision perhaps takes in the form of an enterprising explorer, whose feet still sparkling with ice as he descends from its summit, will crush out the fragrance of the plants which spring up to greet him as he walks downwards into the valley of flowers. From the eminence attained by his enterprise he could trace the course, and measure the elevation of the mountain chain, which give

origin and direction to the rivers, effect the commerce, the languages and migrations of men, fix the character of the vegetations, the abode of its mammalia, and the habits of its population.

Subsidiary to the interest excited by this scene as a landscape, but not subordinate in importance, lies the geographical formation of the ranges which contain their mineral productions, give character to their fountains and increase to the variety and beauty of the vegetation, both on the slope of the mountains and in the valleys below.

Although a scene like this may excite emotion in the bosom of a savage, and awaken a sentiment of adoration for the majesty and power which can give such grandeur to nature, and even pass from the mind of an ordinary observer without any other expenditure of thought, yet to master it as a subject of scientific study would require a prepatory knowledge of what is contained in the writings of Werner and Hutton and Miller on Geology, of Curvier and Buckland on Paleontology, of Geoffrey, St. Hilliare and Agassiz on the races of men and the migration of Animals, of M. Balbi on Ethnography, and of Linnæus and De Candolle and Torrey and Gray on Botany. And to condense the whole into the congree of the "Cosmos" would require the genius and longevity of a Humboldt.

What is there then, gentlemen, left for us to do but to declare the perpetuity of this Association, and renew our vows of fidelity to the requirements of its constitution?

In this proclamation and in these vows are involved the pledges, that in our professional acts we will honor the principles of moral law, which lie at the foundation of our code of Medical Ethics. That we will use our individual influence, and so try to direct the power of this Association, as to secure a higher mental culture to medical students and candidates for medical honors. When this is accomplished the medical schools will rise in character as a correlative effect, and the profession establish for itself a legitimate claim to public confidence and popular esteem. Our custom of meeting in each successive year, in a different State of the Union, prevents the decay of the body, by the introduction of new material; and we illustrate in this way the doctrine of Zymosis, by the rapid assimilation of these new elements into the common mass. Another custom of the Association has done much to bind it to the the individual States, that of shedding its honors upon the profession of the State in which the meetings are held, through which we hope to secure the sympathies of the people, and enlist them as allies in the warfare we are engaged in, against the hosts of ignorance.

A departure from the established usage of the Association, in either of these particulars, would mark the date of its decline both in vital

force and mental vigor. Any restriction put upon its freedom of motion, or attempt made to centralize its influence, would enstamp it with the seal of decay.

But if the avenues to material success are so direct and brilliant, that the talent of the country is tempted to take the shorter road to wealth, whereby we fail in our attempt to lay the foundation of a national medical literature, in holding up a higher exemplar to the medical student, by teaching him the necessity of a thorough preparatory discipline before commencing professional studies, and urging him by the force of opinion, to master the elements of his profession before assuming the responsibilities which attach to the discharge of its duties, we may yet in one way leave our traces upon the national character and our foot-prints on the national history, in the hallowing of one day in our annual calendar, on the recurrence of which, we may have, by the example of our patriotism, the stamp of nationality, in bringing to our shrine no sectional passions, and so conducting our proceedings that brilliant memories shall adorn our annals, the names of our celebrities be embalmed as national benefactors, and the anniversaries of this Association, in honor of their services, shall form by popular consent, one of the holidays of this glorious Republic.

Often in the crises of sectional commotion the moral necessity of a common shrine, a national feast, a place, a time, or a memory sacred to fraternal sympathies and general observance, appals the patriotic heart with regret, or warms it with desire! Were such a nucleus for popular enthusiasm, such a goal for a nation's pilgrimage, such a day for reciprocal gratulation our own—a time when the oath of fealty could be renewed at the same altar, the voice of encouragement be echoed from every section of the confederacy, the memory of what has been, the appreciation of what is, and the hope of what may be, simultaneously felt, what a bond of union, a motive of forbearance, and pledge of nationality would be secured!

By the blessing of the Divine Founder of our holy religion, who, nineteen hundred years ago, went up to Jerusalem with his disciples to celebrate a national feast, may the proceedings of this body be so overruled, that the recollections of this meeting at Nashville to-day, when softened by the "moonlight of memory," may become a hallowed event in the annals of our yearly migration.

On motion of Dr. Flint, of Ky., the thanks of the Association were tendered to the President for his very able address, and the same was referred to the Committee on Publication.

The chairman of the Committe of Arrangements announced that the sessions of the Association would be from 9 A. M. to 2 P. M.

Judge Carton, of the U. S. Supreme Court, being present, was invited to a seat on the stand.

The Nominating Committee then retired for the purpose of nominating officers for the ensuing year.

The report of the Committee on Publication being called for, it was read by Dr. Casper Wistar, of Pennsylvania, and on motion was accepted and referred to the committee on publication.

Dr. Wistar also read his report as Treasurer, which was received and adopted.

On motion of Dr. Flint, of Ky. Dr., R. T. Fleming, of Ky., was admitted as a member of the Association by invitation.

The committee on Prize Essays being called upon to report, requested further time, because of the late hour at which the essays were handed in, which was granted.

The President informed the Association that Dr. F. Campbell Stewart, of New York, Dr. Alden March, of New York, and Dr. Pancoast, of Penn,, had been appointed to represent this Association in foregin scientific bodies.

The committee on Medical Education was called, but made no report.*

The committee on Medical Literature was called—no report.

The committee on Medical Topography and Epedemics being called, a communication from Dr. J. C. Watson, of Maine, was read, asking for further time to make a report, which was granted.

Dr. Arnold, of Georgia, offered the following resolution, which was adopted :

Resolved, That the committee on Nominations be constituted a standing committee during the present session of the Association, to which shall be referred all business of the Association on which an immediate vote is not required.

Dr. Jas. Mauran, of the committee on Medical Topography and Epidemics for Rhode Island, being called for, the Secretary read his apology, which was accepted.

Dr. Peregrine Wroth, of same committee for Maryland, sent in his report, with accompanying reports of Drs. A. M. White and Edmund E. Waters, which was received and referred to the committee on Publications.

Dr. W. L. Sutton, of same committee for Kentucky, sent an apology and asked for further time, which was granted.

The members of the same committee for the State of New Hampshire, Vermont, Massachusetts, New York, New Jersey, Pennsyl-

*Received after the adjournment.

vania, Delaware, Virginia, District of Columbia, South Carolina, North Carolina, Tennessee and Minnesota being called no reports were made.

The delegates from Connecticut and Louisiana being absent for the time, the consideration of their reports was postponed until to-morrow.

A report from Dr. J. F. Posey, of Georgia, was presented by Dr Arnold, and subsequently withdrawn by him for the purpose of preparing an abstract of it.

The committee on Nominations then appeared, and through their chairman, Dr. J. B. Lindsley, reported the following officers of the Association for the ensuing year, viz :

President.—Dr. Paul F. Eve, of Tennessee.

Vice Presidents.—R. J. Breckenbridge, of Kentuckey, D. M. Reese, of New York, W. H. Byford, of Indiana, and Henry F. Campbell, of Georgia.

On motion of Dr. Arnold, of Georgia, the report was accepted.

The chairman stated that the Secretaries will be selected when it is ascertained where the next meeting of the Association will be held.

Dr. Wister, of Pennsylvania, moved that a committee of three be appointed by the President to conduct the newly elected officers to the chair, which was carried.

The President sppointed as such committee, Drs. Wister, Arnold and McGugin,

The President elect being absent, the Association adjourned to meet at 9 o'clock, A. M., to-morrow.

SECOND DAY.

Nashville, May 6, 1857.

The Association met persuant to adjournment. The minutes of yesterday were read and adopted.

The committee appointed on yesterday, Drs. Wister, Arnold and McGugin, were then requested to conduct the newly elected officers to their respective seats.

Dr. Eve, of Tennessee, in taking the chair, addressed the Association in a few pertinent remarks, as follows :

Gentlemen of the American Medical Association :

It is with deep emotion that I attempt to return you my heart-felt thanks for this distinguished honor. In elevating one so unworthy of

this station, so ill-prepared to preside over your deliberations, or carry out the great designs of this body, I must express the apprehension that you have done yourselves injustice, and, it may be, not advanced its best interests. But, believing that this office should neither be sought nor declined, when tendered as it has been, after my State has declined to take any part in the nomination of a presiding officer, I enter upon the discharge of its onerous duties with much diffidence, and shall have frequent occasion to throw myself upon your considerate indulgence.

We are engaged, gentlemen, in a good and noble work. Life, the greatest of human blessings, and health, the sweetest stimulus to earthly enjoyments, are our end and aim. We live to secure the one and to preserve the other. To promote these all important objects, the medical profession of our country have, during the past twelve years annually appointed delegates to assemble and counsel how this may be effected. And we are here to-day on one of these great festive occasions, and, amidst our mutual congratulations, these glorious re-unions of good-will and fellowship among the brotherhood, must not forget that to us is committed the health and lives of others. In maintaining the honor and increasing the usefulness of medical science, we become the best contributors to the welfare and happiness of those around us. You have come up hither from the North and from the South, from the East and the West, and have done well neither to count the cost nor calculate the sacrifice; for the cause in which you are engaged is worthy of you. You present again the sublime spectacle of brethren from all sections of this widely extended Union, congregated to devise the best means to relieve suffering humanity; and may I not add, we are here with

"Our souls by love together knit,
Cemented, mixed in one;
One hope, one heart, one mind, one voice."

Dr. Winston, of Tennessee, read the names of additional delegates to the Association.

Dr. Hooker, from the committee on Medical Topography and Epidemics for the State of Connecticut, being called on for his report, arose and explained that it was his understanding that the committee were to have three years in which to make their report, and at the end of that time he would either be prepared or ask the indulgence of the Association for further time.

The President, under a resolution passed at the last meeting, appointed Drs. Currey, Grant and Evans, a committee on Voluntary Contributions.

Reports now being in order, the report of Dr. Posey, of Georgia, was called for; Dr. Arnold, of Georgia, read an abstract of the re

port of Dr. Posey; all of which, on motion of Dr. Palmer, of Michigan, was referred to the committee on Publication, under a suspension of the rule.

On motion of Dr. Wood, of New York, the reports which were presented yesterday were also referred to the committee on Publication, under a suspension of the rule.

The State of Ohio being called upon for a report upon its Medical Topography and Epedemics, the Secretary read an apology from Dr. G. Mendenhall, who asked further time in which to make a report, which was granted.

The State of Mississippi, Missouri, Michigan Illinois, Indiana, Wisconsin, Iowa, California, and the U. S Navy, being called, no response was made.

A telegraphic despatch from Dr. S. M. Sims, of New York, who was to report on the Treatment of the Results of Obstructed Labor, was received and referred to the appropriate committee.

A communication was received from the Southern Methodist Publishing House, inviting the members of the Association to visit that establishment, which was accepted.

A communication was read by Dr. Lindsley, of Tennessee, from the Medical Association of Washington City, inviting the National Association to hold their next annual meeting in that city. On motion, the communication was referred to the committee on Nominations

A resolution was offered by Dr. Bartlett, of Wisconsin, tendering a vote of thanks to the late President, Zina Pitcher, for the able manner in which he has presided over the deliberations of this body, which was unanimously adopted.

The reports of Special Committees for 1856–7, being next in order, they were called in order as follows:

Inflamation—Its Pathology, etc.—Dr. E. R. Peaslee, Maine; asked futher time. Referred.

Anatomy and Histology of the Cervix Uteri.—Drs. H. Hutchingson and Charles E. Isaacs, New York; no report.

Treatment of Cholera.—Dr. J. Taylor Bradford, Kentucky; no report.

Treatment best adapted to each variety of Cataract, etc,—Dr. Mark Stephenson, New York; further time asked. Referred.

Causes of the Impulse of the heart, etc.—Dr. J. W. Carson, of New York; a communication was received, and on motion of Dr. Brodie, he was continued.

Causes of Infant Mortality, etc.— Dr. D· Meredith Reese, of New

York, read an abstract of his report, which was referred to the committee on Publication.

The venerable Dr. Shelby, of Tennessee, being present, was invited to a seat on the stand. His appearance was warmly acknowledged.

Dr. Hobbs, of Illinois, offered the following resolution:

Resolved, That a committee on Essays, (not including Prize Essays,) be appointed, to whom all essays prepared for publication by this Association shall be referred, which committee shall transfer to the committee on Publication, all Essays they judge worth publishing. That said committee on Essays, make a full report of their proceedings to the Association at its next annual session; provided, authors of rejected essays being informed of said rejection by said committee, shall have the privilege of withdrawing their essays from the report of the committee to the Association.

On motion of Dr. Palmer, of Michigan, this resolution was indefinitely postponed.

The Secretary read a protest signed by Drs. Richard Arnold, J. Gordon Howard, Pike Brown, and Geo. L. Padleford, against admitting the delegates from Oglethorpe Medical College, as follows:

NASHVILLE, May 5, 1857.

The undersigned, members of the American Medical Association, protest against the admission of delegates from the Oglethorpe Medical College of Savannah, on the ground that it is not a regularly organized college, it being a matter of public notoriety in Savannah, that during neither of the two sessions of its existence, have all the chairs been regularly filled. During its first session the chairs of Phisiology and Materia Medica were not filled, except by a very few lectures, by the gentleman appointed to them, and the same thing occurred during its last session as to the chairs of Materia Medica and Chemistry. All of which is respectfully submitted.

RICHARD D. ARNOLD, M. D.
J. GORDON HOWARD, M. D.
PIKE BROWN, M. D.
GEO. P. PALELFORD, M. D.

After several resolutions were offered and some discussion,

On motion of Dr. Palmer, the whole subject was referred to committee of three to be appointed by the chair.

Dr. Brodie, of Michigan, moved as an amendment, that no Faculty Member of a Medical College be appointed upon the committee, which was accepted by the mover.

The Chair appointed as such committee, Drs. Wister, of Pennsylvania, Bemiss, of Kentucky, and Gibbs, of South Carolina.

Dr. Felix Robertson, the oldest physician in Tennessee, being present, was invited to a seat on the stand. He was greeted with marked consideration by the Association.

The committee on Nominations was convened to transact important business.

The calling of Special Committees was resumed:

Spontaneous Umbilical Hemorrhage, etc.—Dr. J. Foster Jenkins, New York. Further time asked. Referred.

Use of Instruments in Obstetrical practice.—Dr. Henry Carpenter, of Pennsylvania. No report.

Measures to be adopted to remedy the evils existing in the present mode of holding Coroner's Inquests.—Dr. Alexander J. Semmes, D. C. Report presented with the following resolution attached:

Resolved, That committee of three, in each State, Territory, and the District of Columbia, be appointed, and that said committee be, and they are hereby authorized in the name of this Association, to memorialize their respective Legislatures, to pass such laws as will best carry into effect the objects of the foregoing report.

The report was referred to the Committee on Publications, and the accompanying report adopted and referred to the committee on Nominations.

True position and value of Operative Surgery, etc.—Dr. J. B. Flint, of Kentucky. Further time asked. Granted.

Causes and cure of indigestion, etc.—Dr. G. Volney Dorsey, of Ohio. No report.

Medical Jurisprudence of Insanity, etc.—Dr. C. B. Coventry, of New York. Further time granted.

Human, Animal and Vegetable Parasites, etc.—Dr. Joseph Leidy, Pennsylvania. No report.

Value of strict attention to position in the treatment of Diseases of the Abdomen.—Dr. M. D. Darnall, Indiana. No report.

Milk Sickness.—Dr. George Sutton, Indiana. No report.

Blending and conversion of the types of Fever.—Dr. Clark G. Pease, Wisconsin. Communication sent, but not received. Postponed.

Best Substitutes for Cinchona, etc.—Dr. B. S. Woodworth, Indiana. No report.

Use of Cinchona in Milarious Diseases.—Dr. Franklin Hinkle, Pennsylvania. Report furnished. Referred to Committee on Publication.

Nervous System in Febrile Disease.—Dr. Henry F. Campbell,

Georgia. Verbal abstract of report given. Referred to Committee on Publication.

Laws Governing the Absorption and Deposit of Bone.—Dr. John Neill, Pennsylvania. No report.

Intimate Effects of Certain Toxicological Agents in the Animal Tissues and Fluids.—Dr. John W. Green, New York. No report.

Intimate Structure and Pathology of the Kidney.—Dr. Charles E. Isaacs, New York. Further time granted.

Diseaseases Incidental to Emigrants, etc.—Dr. Israel Moses, New York. No report.

Etiology and Pathology of Epidemic Cholera.—Dr. T. W. Gordon, Ohio. Partial report presented and referred.

Excretions as an Index to the Changes going on in the System.—Dr. H. A. Johnson, Illinois. No report.

Remedial Effects of Chloroform.—Dr. D. D. Thompson, Kentucky. No report.

Best Method of Causing an Increase in the Number of Essays, etc.—Committee: Drs. Leidy, Wood and Meigs, Pennsylvania. No report. Committee continued.

Changes produced in Composition and Properties of Milk, etc.—Dr. N. S. Davis, Illinois. Communication read and further time granted.

Stomatitis Materna.—Dr. McGugin, Iowa. Further time granted.

An abstract of the report of Dr. Fenner, of Louisiana, upon the Medical Topography of that State, was then read and referred.

Dr. Singleton, of Kentucky, offered the following resolution, which was unanimously adopted:

Resolved, That in the death of Dr. Grafton, of Mississippi, the American Medical Association has lost a talented and useful member, and society a benefactor.

On motion of Dr. Whitaker, of Tennessee, Dr. H. Ronalds was expelled from the Associatiation for giving certificate contrary to the rules of the Association.

Dr. Caspar Wister, chairman of the committee upon the admission of the delegates from Oglethorpe Medical College, reported as follows:

Dr. W. Benson asserts that for the past session the Oglethorpe school has been fully organized, that six professorships have been regularly filled, and that the occupants of these chairs have been in the constant fulfillment of their duties, except in cases of illness; such instances having, however, at no time interrupted the regular course of lectures, the professor absent having had his place supplied by his colleagues. The seventh chair is admitted to have been vacant; the duties were discharged however, fully by other members of the faculty.

Dr. R. D. Arnold prefers no charges beyond those admitted above.

Therefore, your committee finding nothing that infringes upon the strict letter of the law of the American Medical Association, in reference to the admission of members, we recommend that all further action in this question be suspended.

CASPAR WISTAR,
R. W. GIBBES,
A. M. BEMISS.

The Secretary read the following preamble and resolutions, which were unanimously adopted:

Whereas, It has pleased God to remove by death our fellow-member, Robert M. Porter, and because of his devotion to the interests of the Profession of Medicine, and his steady support of the American Medical Association.

Resolved, That this association learned with unfeigned sorrow of his decease; and that they have lost a firm and intelligent supporter, and society a benefactor and friend.

Dr. T. Bullard, of Indiana, offered the following:

Resolved, That in the death of Dr. John L. Mothersett, this Association has lost a useful member, and society a benefactor.

The Secretary read a commuuication from the Connecticut Medical Society, asking that the time for holding the meetings of the Association in northern cities be changed to a later period in the year. Referred over to the next meeting by the Constitution. Adjourned to meet at 9 o'clock, A.M. to-morrow.

THIRD DAY.

NASHVILLE, May 7, 1857.

The Association met pursuant to adjournment. The minutes of yesterday were read and adopted.

Dr. Hoyte, from the Committee of Arrangements, read the names of additional delegates to the Association, who had arrived since the meeting of the Association yesterday.

The Secretary read a communication from Dr. Clark G. Pease, of Wisconsin, which accompanied his report on "*Blending and Conversion of the Types of Fever.*"

Dr. Hooker, of Connecticut, moved that the report be referred to the Committee on Voluntary Contributions.

Dr. McKinley moved to amend by having a portion of the report read, which was lost, and the motion recurring to refer the report, it was carried.

Dr. Currey from the Committee on Voluntary Contributions, submitted the following report, which was accepted:

The Committee on Voluntary Contributions has examined the following papers, and reccommend them for publication in the Transactions of the Association.:

1st. A new Principle of Diagnosis in Dislocations of the Shoulder Joint. By L. A. Dugas, M.D., Professor of Surgery in the Medical College of Georgia, Augusta: accompanied by four photographic plates illustrating the principle.

2d. Medical Statistics of Washington Territory. By George Suckley, M.D., U.S.A., embracing, 1st, Geological Divisions of the Territory; its Geology, Meteorology, Fauna. 2d. White population and its diseases. 3d, Native population: Diseases; Medical Practice; causes of their rapid disappearance; concluding remarks.

3d. Medical Flora of Washington and Oregon Territories. By J. G. Cooper, M.D.

All of which is respectfully submitted.

R. O. CURREY,
R. T. EVANS,
GEO. R. GRANT.

Dr. Yandell offered the following resolution:

Resolved, That this Association re-affirm the principles respecting the rights of constituent bodies announced in a report contained in Volume V. of its Transactions, in the following terms:

"The Faculty of every Medical College, shall have the privilege of sending two delegates to this Association, *provided*, that the said Faculty contain not less than six Professors, who give one course of instruction annually, of not less than six weeks, on Anatomy, Materia Medica, Theory and Practice of Medicine and of Surgery, Midwifery, and Chemistry; and also that said Faculty requires that its candidates for graduation, among other requisites, shall have attended two full courses of lectures with an interval of not less than six months between them, one of which courses must have been in their Institution.

Dr. Breckinridge in the Chair.

Dr. Buchanan proceeded to discuss the resolution, and at the close of his remarks, moved to lay it on the table, which was subsequently withdrawn.

Dr. Boring offered the following resolutions in lieu, which he proceeded to discuss:

Resolved, That this Association has not the power to control the subject of Medical Education.

Resolved, That the great objects of this Association are the advancement of Medical Science, and the promotion of harmony in the profession.

Resolved, That the attempt upon the part of this body to regulate Medical Education, having most signally failed in its object, and already introduced elements of discord, any further interference with this subject would not only be useless, but calculated to disturb and distract the deliberations of this Association.

Dr. Currey offered the following resolutions in lieu of the whole:

Whereas, The subject of Medical Education has been committed at each annual Session to Standing Committees, and various suggestions have been proposed, which the Association has adopted, and recommended to private instructors and to the Medical Colleges.

Resolved, That a Committee of five be appointed by the Committtee on nominations, as a Special Committee, to be composed of members who are in no respect connected with any Medical School, to devise a *System of Medical Instruction*, to be presented for the consideration of this Association at its annual Session in 1858.

Resolved, That the proposed system shall set forth a uniform basis, upon which our Medical Institutions shall be organized, as well as have reference to the best mode of securing the Preparatory Medical Instruction to the Student, and that consequently the legitimate subjects to be embraced in said system, will include Primary Medical Schools —the number of Professorships in Medical Colleges, the length and number of terms during the year, the requisite qualifications for graduation, and such other subjects of a general character as to give uniformity to our Medical system and preserve harmony and friendly intercourse in the ranks of the profession.

Resolved, That, upon the adoption of the proposed system by the Association, all Institutions which may conform to it shall be entitled to representation at the Annual Sessions of this Association and none others.

The subject was further discussed by several members of the Association.

Dr. Reese, after some remarks, moved the indefinite postponement of the whole subject, which was lost.

Dr. Arnold moved the previous question, which was lost, and the discussion proceeded at considerable length, when

Dr. Hooker moved the previous question on the resolutions of Dr. Currey.

The reading of the various resolutions being called for, they were read to the Association.

The motion of Dr. Hooker being in order, the previous question was called, and the resolutions of Dr. Currey were adopted.

Dr. Lindsley, from the Nominating Committee submitted the following report:

Secretaries.—Robert C. Foster, of Tennessee, A. J. Semmes, of Washington City.

Treasurer.—Caspar Wistar, of Philadelphia.

For the next place of meeting, Washington City.

STANDING COMMITTEES.

Committee of Publication.—Francis G. Smith, of Philadelphia chairman; Caspar Wister, of Philadelphia; R. C. Foster, of Nashville; A. J. Semmes, of Washington City; Samuel L. Hollingsworth, of Philadelphia; Samuel Lewis, of Pennsylvania; H. F. Askew, of Delaware.

Committee on Prize Essays.—Grafton Tyler, of Georgetown, D. C., chairman; J. C. Hall, of D. C.; J. F. May, of D. C.; Thomas Miller, of D. C.; A. J. Semmes, of D. C; Joshua Riley, of D. C.; W. J. C. Duhamel, of D. C.

Committee of Arrangements.—Harvey Lindsly, chairman; W. J. C. Duhamel, Cornelius Boyle, P. H. Coolidge, G. M. Dove, A. Y. P. Garnett, Wm. P. Johnston, of D. C.

Committee on Medical Education.—G. W. Norris, of Philadelphia, chairman; A. H. Luce of Illinois; E. R. Henderson, of South Carolina; G. R. Grant of Tennessee; T: S. Powell, of Georgia.

Committee on Medical Literature.—A. B. Palmer, of Detroit, chairman; A. F. Alexander, of Alabama,; J. M. Mosgrove, of Ohio; P. Cassidy of Pennsylvania; S. Pollak, of Missouri.

Vacancies in Committee on Medical Topography and Epidemics.—T. B. Shuford to fill the vacancy caused by the death of Dr. Grafton, of Mississippi. C. W. Parsons, to fill the vacancy caused by the resignation of Joseph Mauran, of Rhode Island.

SPECIAL COMMITTEES.

Spontaaeous Umbilical Hemorhage of the newly born.—J. Foster Jenkins, of New York.

Influence of Marriages of Consanguinity upon Offspring.—Dr. Bemiss, of Kentucky.

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THE
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Original Communications.

ARTICLE I.—*Notes upon Glycerine.* By FREDERICK STEARNS, Pharmaceutist.

In a pure state, Glycerine forms a nearly colorless and very viscid liquid: sp. grav. 1.27, without odor, of an intensely sweet taste, mixing with water and alcohol in all proportions, but insoluble in ether.

That obtained by distillation under the new patent process of Price and Company (London) is entirely free from lead, earthy salts, and from bad smelling volatile fatty acids, which are present after the usual processes of refining, in ordinary Glycerine obtained from lime saponification, and in the process of lead plaster making.

The applications of Glycerine depend mostly on its remarkable solvent powers, its property of absorbing moisture, its bland and soothing character as an application to injured and diseased surfaces, and its nutrient qualities. As a fattener it is likely to be a useful adjunct to cod liver oil.

It has considerable power in preserving animal substances from decay, and fixing their colors. The advantages of using Glycerine as a solvent and excipient are many.

Its solvent power very often equals that of water or alcohol, and even is sometimes greater; it can be mixed with

alcoholic and aqueous solutions, it is not subject to changes, particularly it does not become rancid, its preparations may be used like any oily embrocation; they will be readily absorbed by the skin, which afterwards may be washed with a little water. Wounds, after they have been dressed with such a preparation, may be easily washed out with warm or even cold water; surgical instruments may be cleaned with much less difficulty.

It dissolves the vegetable acids readily. By the aid of heat one part of tannic acid may be dissolved in four parts of Glycerine.

The Sulphurets of Potassium and Calcium dissolve in ten times their weight of Glycerine. These solutions must be kept from the air, and are readily decomposed by the addition of water.

Iodine and the iodides generally, are readily taken up by this substance. The Iodide of Sulphur, insoluble in alcohol or water, dissolves one part in sixty parts of Glycerine. One part of Iodide of Potassium requires but three parts of Glycerine for its solution.

Dr. Gage, of New Hampshire, recommends an Iodureted Glycerine in skin diseases, prepared in this way: one part of Iodide Potassium is dissolved in three parts of Glycerine and one part of Iodine added, which completely dissolves, in employing it the application of it is covered with a paper of gutta percha to prevent the evaporation of the Iodine.

It is suggested that by dissolving in Glycerine, escharotics and astringents such as Chromic Acid, Terchloride of Antimony, Pernitrate of Mercury, Iodide of Zinc, etc., which are used in venereal diseases, that their action could be made to continue longer and be under the control of the physician better than when used in aqueous solution.

Glycerine dissolves when heated 1-40th of Sulphate Quinia, which forms, upon cooling, a transparent gelatinous mass.

It forms solutions with most of the delliquescent salts, sulphates of Potassa and Silver, the alkaline chlorides, Potassa, Soda, Baryta, Strontia, Bromine and even Oxide of Lead. It dissolves or suspends the vegetable alkaloids in the same manner as the aqueous liquids, the solutions may be used for the same purposes as though mixed with oil. The salts of

Morphia, Brucia, Strychnia, Veratria, and most preparations of the same order dissolve in it completely even when cold, all when hot, but when cold seperate into clots, which when triturated with the supernatent liquid, give it the consistence of a cerate very useful for frictions and embrocations.

One part of Bin Iodide of Mercury requires three hundred and forty parts of Glycerine for its solution.

Five parts of Glycerine and one part of Gum Arabic form a transparent mucilage. One part of Glycerine to three of powdered Gum Arabic unites to a thick mass which when spread adheres well and is very flexible, a few drops of Glycerine added to the court plaster mass makes it pliant and prevents the spread plaster from cracking.

Glycerine mixed with an equal part of tar, and strained, forms a tar glycerole of a dark amber color, strong smell and oily consistence, serviceable in some skin diseases.

Equal parts of Ammoniac and Glycerine unite to the consistency of plaster, one part of the first to seven of the latter forms a cream like glycerole which may be strained through linen and does not separate.

Camphor is only soluble in it, one part to four hundred.

Glycerine, it is believed, would form a better absorbent of the active principles of fresh plants than fats, in the making of ointments, because in addition to the clorophyll, wax, aromatics, and coloring matter, which fats only take up, the Glycerine would take up or dissolve, besides these the gum, sugar, tannin, extractive matter, watery juices, alkaloids and the aroma.

One part of Glycerine added to fifty parts of Collodion imparts to it flexibility and elasticity.

As it is a solvent of Urea and Phosphate of Lime it is suggested as a solvent of Urinary Calculi by injecting it into the bladder, where from its blandness it should not cause irritation.

Its properties of soothing and keeping moist the skin have caused it to be used upon chapped hands and sun burnt faces.

It has been proposed as a substitute for syrup in preserving fruits, and mixed with alcohol or pyroxylic spirit, as an economical fuel for spirit lamps.

In the preparation of several medicines, Glycerine may be

substituted for sugar, preserving them from change and improving the taste. Griffiith's Iron Mixture is mentioned as an example of this.

Glycerine was first introduced some ten years since as a new remedy for certain cutaneous diseases, by Mr. Startin, its usefulness depending upon its bland nature and capability of resisting evaporation at considerable temperatures. A lotion of half an ounce to six of water effectually prevents the skin from becoming dry, it is added with advantage to poultices and also to baths.

Mr. Startin speaks of its use chiefly in *psoriasis, pityriasis lepra, and ichthyosis* in which he describes it as producing excellent palliative effects, it keeps the part moist and prevents the formation of scabs.

It can be used somewhat diluted with water in *burns* and wherever it is desirable to prevent the drying influence of the air from irritating an exposed surface. Heretofore, the principal reputation Glycerine has attained as a medical agent is due to the remarkable effects said to be produced by it in restoring the power of hearing in cases of confirmed *deafness*, but the later experiments of Dr. Wilde fail to confirm its value, though doubtless it is valuable in lubricating the auditoy canal in those cases of deafness where a dry condition of that canal exists.

As an internal remedy, Dr. Crawcour, of New Orleans, introduced it into use. He employs it in all cases where he formerly employed Cod Liver Oil and with better effect, it possessing all the remedial virtues of the latter, without disordering the digestion. It has been employed in phthisis and scrofulous disease with marked success. In addition to its antistrumous property, it aids in assimilating the Salts of Iron, especially the Iodide. The dose administered is from one to three drachms, three times a day in water; in those doses it in a short period relieves the cough, improves the digestive powers, and increases the deposition of fat.

Dr. Crawcour suggests that hot Glycerine will dissolve Phosphorus in the ratio of two grains to the fluid ounce and considers the resulting glycerole of Phosphorus as much superior to the common phosphorated oil, from the effect of this solution upon himself he is of the opinion that in this form

Phosphorus more readily enters into the circulation and manifests its peculiar stimulant action; he thinks ten to thirty minims sufficient for a dose. More recently Dr. W. L. Lindsay (Perth, Eng.) in order to test the nutrient properties of Glycerine tried its effects upon himself by taking two or three spoonsful daily for several weeks, the result was a gain of two pounds in weight in one month, on discontinuing the Glycerine his weight gradually fell until after an interval of six weeks he found himself one pound lighter than when he commenced the use of it. He also tried it as a dietetic remedy along with various articles of food. Pure Glycerine is so intensely sweet that it cannot be used alone but should be diluted according to the purpose for which it is prescribed. Coffee when partially sweetened with Glycerine in addition to ordinary sugar is pleasant and free from any peculiar taste. It can be used to sweeten tea or milk though it is therein more readily detected. Its admixture with water is palatable and is probably its most convenient form of administration. Dr. Lindsay further observes, "I carefully observed its effects as a nutrient and alterative in eight patients—four males and four females, to whom it was given in doses of two or three tea or tablespoonsful daily for the space of a month.

They were weighed at intervals to ascertain their gain or loss of flesh; for I found that apparent physical improvement was not a reliable criterion of real physical growth—that a most marked amelioration in the general health did not always coincide with increased weight of body. All the patients before taking it were more or less anaemic, emaciated and feeble; in all, their diet, exercise, and occupations, were otherwise the same. At the end of the month all of them *appeared* greatly improved in their general condition; they seemed plumper and stronger, and the countenance, in some, was even ruddy."

The following formulae are from the Northwestern Medical and Surgical Journal:

"For cases of tubercular disease in its early stage before the cough is accompanied by much expectoration we frequently prescribe:

R. Glycerine—two fluid ounces.
Iodide Potassium—one drachm.
Sulph. Morphia—two grains.

Mix and give one teaspoonful before each meal and at bed time.

If the disease is farther advanced and expectoration more copious with rapidly increasing emaciation, we prefer the following:

R. Glycerine—two fluid ounces.
Syrup Iodide of Iron—one half fluid ounce.
Sulphate Morphia—two grains.
Mix, and give one teaspoonful every four or six hours."

Startin's formula for Glycerine Liniment:
Take Glycerine—one fluid ounce.
Powd'd Tragacanth—one fourth to one-half ounce.
Lime Water—four fluid ounces.
Rose Water—three fluid ounces. M.
As a liniment or embrocation in *prurigo, lichen strophulus, lepra, psoriasis, pruritus*, &c.

Startin's formulae for Glycerine Lotion:
Take Glycerine—one-half fluid ounce.
Diluted Nitric Acid—one-half to one fluid drachm.
Subnitrate Bismuth—one-half drachm.
Tincture Digitalis—one fluid drachm.
Rose Water—Seven and one-half fluid ounces.
M. As a lotion, (to be used by dabbing the part) for *chapped nipples* or *hands, fisures of the lips, irritation of the skin* of any kind, exposure to the sun, *pityriasis*, &c.

R. Glycerine—one-half fluid ounce.
Powd'd Borax—one-half to one drachm.
Rose Water—seven and one-half fluid ounces.
M. Used (by dabbing the affected part) in *Alopecia* following fevers; in *dryness or want of action in the scalp, thinness of the hair.*

R. Glycerine—one-half fluid ounce.
Aromatic Spirits Ammonia—one fluid ounce.
Tincture Cantharides—two fluid drachms.
Rosemary Water—Seven fluid ounces.
M. As a lotion to be used with a wet hair brush once or twice a day in *rheumatism* or *gout, neuralgic pains, sprains, bruises, stiffness*, &c.

R. Glycerine—one-half fluid drachm.
Comp'd Soap Liniment—one and one-half fluid oz.
Extract Belladonna—one drachm.

M. As an embrocation to be used twice a day in the ordinary manner.

The writer of this article has prepared the followlng ointments for chapped skin, sunburn, etc., which from their elegant appearance and perfume have proved very acceptable to those for whom they were designed :

Glycerine Cream.

Take White Wax—three drachms.
Spermaceti—one ounce.
Glycerine—three fluid ounces.
Oil Almonds (sweet)—six fluid ounces.
Exiract Orange Blossoms—one fluid ounce.

M. Prepare after the method of cold cream.

Glycerine Jelly.

Take Powd'd Gum Arabic—one-half ounce.
Simple Syrup (3 oz. sugar to 1 oz. water)—four fluid ounces.
The yolks of three eggs.
Olive Oil (pale)—four fluid ounces.
Glycerine—two fluid ounces.

Rub the Gum and Syrup well together, then add the yolks of eggs and when well mixed, add gradually the Glycerine and oil, previously mixed together. Perfume to suit.

These preparations though properly belonging perhaps to the perfumer—form very agreeable methods by which to obtain the soothing influence of Glycerine in all irritable states of the skin.

In conclusion, though a variety of uses, actual and possible, for Glycerine have been mentioned, yet in considering its power as a solvent, its bland nature, its freedom from all irritant, exciting, acid, and fermenting properties, it is obvious that but few of its uses have been as yet developed, and it is believed that pure Glycerine is destined to become among the most valued of modern products.

162 *Jefferson Avenue, June* 8, 1857.

ARTICLE II.—*Case of dislocation of both clavicles, at their sternal extremeties,—Serious injury of the Pulmonary structures by depression of the Superior portion of the Sternum; Copious Hæmorrhage,—Recovery—Remarks.* By EDWARD KANE, M. D.

On the 27th of August, 1849, at 4, P. M. I was hastily called to see a young woman sixteen years old, to whom the following casualty had occurred. Returning from school in company with a number of others, she was met in the street, by a drove of cows and young creatures, among which, was an extraordinary sized Durham bull. It was during a season of severe drought, and the cattle were on their way from a dry hill pasture to the low grounds, a mile distant, where was abundance of water. In their ardour to slake their thirst, they were wild and uncontrollable, and happening to pass when the children were returning from school, the young woman was run against knocked down, and the bull stepped with one of his fore-feet, upon the upper portion of her Sternum, severing it from its attachments to the clavicular on either side and driving it down upon the apices of the lungs. The extent of injury to the pulmonary tissue, from such an immense weight upon that part of the sternum and the imminent danger will be readily inferred. Not far from an hour elasped before my arrival. I found her, sustained by friends, in a semi-recumbent pasture, with a scarcely perceptible pulse, heart's action, correspondingly feeble, surface, cold, countenance tumid and mottled, as were the extremities, also; great difficulty of breathing, with loud tracheal rattle, florid and frothy blood, discharged from the mouth and nostrils, in considerable quantity; expression of the countenance and eye, fatuous, and the superior portion of the sternum depressed, as was judged at the time, three fourths of an inch to an inch. How much blood had been lost, prior to my arrival, I had no means of determing, but basing opinion upon what was observed on the ground, on her clothes, towels and in vessels, furnished for the purpose of catching it, the quantity must have been very great. She was not otherwise injured. To what extent the lungs were inflated, at each inspiration, in other words, over how great, a portion of them, the respiratory murmur could be heard, could that be ascertained on account of

the extreme loudness of the treacheal rattle. Though conscious, intellect was almost annihilated; certainly, the mind seemed quite in the confused and unfeebled oondition of a person in articulo mortis.

Treatment.—The indication was first, to free the chest as completely as possible, from all constraint, by clothing, or otherwise, in order that sufficient air might be admitted, at each inspiration, to approximate normal hæmatosis; to aid the circulation, as far as practicable, by elevating the depressed sternum to its natural position; the most favorable posture, both for the escape of the blood, which was soon observed to be diminishing in quantity, and easy respiration; to augment and preserve the animal heat, and particularly, in the extremities, and to support the feeble powers of the economy, by appropriate diffusible stimuli. For the time, the dislocations of the claviculæ were matters of minor consequence, and therefore, were but little cared for, until reaction was produced, and the energies of the system satisfactorily restored. Carbonate of ammonia was administered, brandy and water also, from time to time, and dry heat applied to the extremities unremittingly. The patient was placed in a reclining posture, with an inclination towards one side, with the view of aiding, as much as position could be made available to that purpose, the escape of blood and tracheal secretions, and, by inserting the finger, as far as practical, beneath the sternum, at the slight depression, in its superior extremity, it was raised, to its place, from which, as respiration became more free, aided passibly by tumefaction of the tissues within that section of the cavity of the chest, it manifested no marked tendency to recede. During the three succeeding days, her condition was most critical. She was sustained, however, in the best manner possible, by steady persistence in the use of the above mentioned measures, bland but nourishing food, and absolute quiet, both corporeal and mental. The hæmorrhage subsided gradually, and by the morning of the twenty-ninth, was completely suspended. On the thirty first reaction was, in a tolerable degree, established, but it never arose to a point above the normal standard. For a number of days, there was copious expectoration, at first, of a bloody consistence and appearance, but finally, of muco-purulent characteristics. By the first of September, the condition of the patient was so far improved,

that I deemed it proper to adjust the claviculæ and seek to effect their union with the sternum. For this purpose, the double headed roller was used, after the manner of Charles Bell, with nicely adapted compresses and cushions and the arms properly supported in slings. I found but little difficulty in retaining the dislocated bones in situ. The completest state of quietude, compatible with the sufferings of the patient was steadily maintained; the general medication and nourishment were adapted to the condition of the economy, and an anodyne, interposed, from time to time, as pain jactitation, and sleeplessness required. Under these measures, faithfully carried out, I had the pleasure of seeing my patient improve, from day to day, until, between the third and fourth week, complete union having been consummated, she was dismissed cured. I had considerable solicitude about the ultimate soundness of the lungs, apprehending that injury, so serious had been inflicted, as greatly to interfere with normal respiration and therefore, with the function of hæmatosis. Fortunately, however, I was unnecessarily solicitous, since, in the course of a year, she married, is now the mother of a number of children, and at my last information, about one year since, she was in perfect health. I have deemed the case of sufficient interest, in several particulars, and especially, as connected with grave injury of organs, that are intimately related to life, and ultimate recovery, to warrant the subjoined:—

Remarks—The extent to which organs and tissues, of the most delicate structure, may be injured by external violence, by acute or protracted chronic disease, compatible with life and ultimate restoration, to a normal condition, or of the enjoyment of competent health, under progressive disease of fatal tendency, is not less a source of deep interest to the profoundly learned in anatomical and physiological science than of wonder to the uninitiated, and inexperienced. A few examples may be referred to, in illustration and, first, of such as are produced by external causes. Only, a superficial acquaintance with the history of surgery and surgical maladies will be sufficient to convince the most doubting of the truthfulness of the above suggestions. Without undertaking to illustrate, by a reference to the records of military surgery, where innumerous, pertinent examples may be found, it will be sufficient to refer to some of the rarer cases, that are met with, in private observation, with

an allusion, merely, to one or two, which occurred on the battle field. The brain is conceded to be among the organs, most intimately connected with life and a healthful condition, both of mind and body, But the recorded observations of medical men show, not only, that the cranium may be fractured, portions of it depressed and driven down upon the substance of the brain, lacerating its dense fibrous envelopes, not less than its more delicate membranes, but penetrating its very substance, and yet under the skillful application of surgical science, the parts are restored to a normal state, and health, as well mental as physical, completely established. Indeed, under such injuries, very considerable portions of its substance are, not unfrequently, removed, adhering to the depressed portions of bone, or to slivers, projectiles etc., that have been driven into the brain, and still the same fortunate results have been known to follow. I knew a case, many years since, in which a lad was precipitated, with great violence, from a horse, against the extremity of a large log, recently chopped, from which a sliver, three fourths of an inch in diameter projected, was driven through the right parietal bone into the hemisphere of the cerebrum. It was removed, as also, spiculæ of bone, with portions of the brain of considerable size, adhering to them; the patient was intelligently cared for, treated, and recovered. Those, who are familiar with the literature of surgery, for the few past years, will recollect the case, which occurred in one of the New England States, of a railroad operator, who while blasting rocks, had his tamping iron, twelve to eighteen inches in length, and not far from an inch in diameter,—entering beneath the orbitar arch,—driven through the anterior lobe of the cerebrum and passing out through the parietal bone of the same side. He recovered; and when I last knew of him—something less than two years since—he was healthy vigorous and robust. The annals of surgery are not wanting in instances of like import and equally satisfactory results.

Argument is not necessary to convince the least informed, how essential to life and health, is the heart; yet, even *it* has been wounded with penetrating weapons, and if memory do not deceive me, with bullets, while yet the patient has not only recovered, but enjoyed a comfortable state of health for years, thereafter. Most, doubtless, are familiar with the famous case of Wm. Pool, of recent occurrence, in the city of New York.

In this example, the bullet was lodged in the muscular parieties of the heart. The patient, notwithstanding, lived twelve days, and by the well informed in surgical pathology, and therapeutics as well as physiology, normal and anormal, I shall not be regarded as altogether fanciful or heterodox if I offer the belief that, but for an unfortunate visit by a person, who was offensive to him, the resulting passion and exertion, he might, nay, probably *would have recovered.* Certainly, no grave symptoms had manifested themselves, prior to the event, just referred to. The post-obit examination revealed, not only singular difficulty in finding the ball, but the process of reparation as having made considerable progress.

The stomach and alimentary canal too, are among the organs, the integrity of whose structure and the healthfulness of whose functions are scarcely less indispensable to perpetuated existence, than those already mentioned; and still, *these* may be punctured, lacerated and torn, without the sacrifice of life or the necessary ruin of health.

Surgical record is not jejune of examples, illustrative of the truth of this proposition. Nor are the secular journals deficient in detailing the outline of cases, of almost daily occurrence, in the scenes of dissipation and riot, of penetrating wounds of the abdomen, in a greater or less proportion of which, the intestines are wounded, which result in recovery and the after enjoyment of comparatively good health.

In truth, if no other example were extant, than that of St. Martine, wherein some thirty-five years since, the stomach was fearfully wounded, by an accidental shot from a musket, is sufficiently illustrative.

He not only recovered, but, in spite of vicious habits and variously modified management and experiments, for scientific purposes, he has enjoyed sound health during all the long interval, since recovery. I was accustomed to see him, almost daily during most of the summer of 1833,—sometimes drunk and sometimes sober: and again, not quite a year since, I saw him, and while I regret to say he evinced unmistakable evidence of persistence in his old and cherished vice, nevertheless, I was agreeably surprised to notice how slight were the inroads made upon his constitutional vigour, by the conjoint influences of the fistulous opening into the stomach,

poverty, hard labor, poor living, continued intemperance and accumulating years. Cases of serious lesion of the intestinal canal are of frequent occurrence, in connection with strangulated hernia, which, after operation, are recovered from, and it were fortunate, if no instances could be brought forward, as evidence of the culpable ignorance or the no less culpable carelessness of men, who take upon themselves, the responsibilities of physicians. A few months since, I was informed by an intelligent practitioner, of a case, in a neighboring city, in which, in attempting to deliver a fœtus, with the blunt hook, after embryotomy, about twelve inches of the rectum,—nearly its entire length.—were torn away. It was a case, in which consultation was had, at an early period. The patient, after much suffering, recovered her health, with no worse consequence than that of the performance of the function of defecation pervaginam. But few textures of the organism are more delicate than those of the lungs, nor are there any, perhaps, whose abnormities are more distructive of life, and, whose functions are more intimately related to existence, yet they may be punctured, with spiculæ of bone, in cases of fracture of the costæ; with deadly weapons and even perforated with bullets. Persons may be shot through the chest, one or both lungs being involved in the injury, and still, recover, live on to good old age, and in the enjoyment of a tolerable share of health.

I have met cases of attempted assassination, wherein, a lung has been deeply wounded, copious quantities of blood discharged; air escaping largely through the external wound, while yet under judicious management, complete recovery has occurred. In fracture of the ribs, I have known the pulmonary structures to be seriously wounded and air effused into the areolar tissue external to the costæ constituting fearful emphysema and giving rise to the gravest and most dangerous form of dyspnea. In *such* even, recovery has followed and good health has been attained. Like examples, doubtless, are familiar to the observation of most practitioners of experience. Certainly, they are not of unfrequent occurrence. It has been my pleasure to have enjoyed the intimate acquaintance of a gentleman, now, not far from seventy years old, who, during the last war of our own country with Great Britain, was shot through the chest, while leading on his command at the battle

of Chippeway, in Canada West,—the ball, entering one side and passing out at the other. He recovered; and during the long interval, that has intervened, has enjoyed as good health as falls to the lot of most men. Retiring from the army, he qualified himself for the practice of law, which profession, he pursued, with distinction, for many years. The only consequence, which gave rise to any considerable inconvenience, was a tremulousness, which, as age and its infirmities have increased, rendered it difficult for him to write. The example of the heroic Gen. Shields, who met a similar casualty at the head of his column, in one of the hard fought battles of the late Mexican war, will, at once, recur to the recollection of the reader. The General so far as I am informed, though possibly not feeling himself quite as competent, physically, to endure severe and protracted muscular exertion, enjoys a comparatively good state of health. But, secondly, if organs and tissues, which are intimately connected with life, may be thus, injured, by casualties and external violence and not be destructive of *life* or ruinous of health, it is not less true that they may undergo derangement of function and injury of structure, from disease, acute and chronic, quite equal to such as have been instanced, in the foregoing remarks, and yet, under the salutary influence of intelligent medication, aided by the recuperative powers of the economy, be restored to a normal condition—the entire organism may resume its wonted healthful monuments and existence may be prolonged many years. A slight reference, only, will be necessary, on the part of the reader of observation and reflection, to acute inflammation and its consequences, to revive in his recollection, pertinent illustrations. In this relation, it will be unnecessary to particularize. Perhaps, however, examples of as marked significance, as are to be found in the domain of professional literature, may be traced, in the pathological results of chronic disease. A few references will suffice. Possibly the more common forms of chronic disease of the brain are less frequently followed by *complete recovery*, than are grave maladies of other organs, whose integrity of structure and function are indispensable to a comparative state of healthfulness, if not of life. Here, however cases of deep interest may be found. Among others, not less instructive the following may be mentioned. A student of great physical and mental energy was attacked, dur-

ing the summer of 1822, with acute disease, in which the cerebral organs were chiefly involved. He was twenty years old. After continuing, with fearful severity, for some time, it resulted in hemiplegia of the right side. At the end of some months, sensibility and muscularity were completely restored, except in the muscles charged wifh the flexion and extension of the foot on the tibia. In these, muscularity has been imperfect ever since, but sensibility has been perfect and his general health, remarkably good. In the caurse of the next year, he returned to the university, and, after completing his literary course, read law; in due time, entered upon the duties of his profession and has ever held a commanding position at the bar, having from an early period, been regarded one of the first advocates, in the state, whose literature, and institutions, he adorns.

In the summer of 1849, a laborer, after having wrought at his vocation,—that of principal sawyer, in a large lumber establishment,—was, suddenly attacked with the gravest form of general paralysis. It was one of those, not altogether common cases, in with vitality was all but extinct. Sensibility and voluntarity were completely annihiliated,—respiration and circulation, alone continuing. In the course of a year, however, he so far recovered, as to begin to walk, and, with some hesitancy and difficulty of utterance, to converse. From this, recovery progressed to such an extent, that all the natural functions were accomplished with normal energy and he was able to perform some light labor. I saw him, in the month of April last, and discovered no other evidence of physical defect, than incapacity for sprightly movement, muscularity not being quite so perfectly restored in one limb as in the other, a tardiness of utterance and difficulty in recalling to recollection, certain words, or, perhaps, in associating particular ideas with their proper representatives. His personal appearance considered and the fact that the natural functions are normally performed, he must be regarded as enjoying perfect health. Examples of equal interest might be drawn from the history of chronic hydrocephalus, but my proposed limits forbid the further prosecution of this department of the subject. In the heart, cases will be met with, of the profoundest disease, which have progressed with singular tardiness, the patient, meanwhile, enjoying the plenitude of health, until some unusual ex-

citement or indiscrete exertion or indulgence, as of mental purturbation, shall call forth symptoms, that are characteristic and declarative of the disease, or such as are anomalous, and, after a more or less protracted continuance, terminating in death. Under such exertion or excitement and when the malady has advanced to a certain extent, death may occur suddenly and without marked premonition. Instances of the former may be found in works on diseases of the heart, and, particularly in Latham and Graves' clinical lectures.

Of the latter, the melancholy and untimely death of the most eminent man of his own—I had almost said of any age—John Hunter, is an apposite instance. Of analogous conditions and results, connected with chronic disease of the stomach and alimentary canal, illustrations will offer themselves to him, who has read and observed, in those exceedingly painful and dangerous cases, in which perforation, from the gradual progress of ulceration has taken place. That recovery under such unfavorable circumstances, does occur, I believe, is not, now, to be questioned, and that comfortable health may follow, rests on established data. I do not propose to instance examples. To have mentioned the facts, fulfills my purpose. But if the brain, the heart, the stomach and intestines may be thus, seriously diseased and recovery, ultimately ensue, or if in either, disease necessarily fatal, may pass on, to its final termination in death, while plenary health may be enjoyed, up to the last moment, or to a brief period prior to the sad event, it is quite certain that the lungs may be as seriously implicated, and, under appropriate treatment, recover, and a condition of satisfactory health be established. In confirmation, I need only refer to the softening of tuberculous masses, the cicatrization and restoration of the pulmonary tissue to a condition of soundness, and the ultimate correction of the tuberculous cachexia, to an extent, at least, compatible with a good degree of vigor. I might produce other examples, not less significant and instructive, as vomicæ, empyema, gangrene pulmonum, etc., but a reference, merely, will suffice, to indicate their appositeness.

In consideration of the foregoing case, and observations, the following conclusions may be deduced. First, it is the duty of he medical adviser, though his case be fraught with the most

imininent danger, not to be too hasty in pronouncing an unfavorable prognosis. Second, to study well, those portions of professional literature, that contain the record of cases of disease, which are most fearful in their import; to contemplate and seek to understand the laws of life, and the strong tendency, implanted in the constitution, to resist the influences of hurtful powers, and by consequence, to effect restoration, when injury has been sustained. Third, in the treatment of such cases, to consider, most fully, the true therapeutical action of the measures he proposes to adopt, lest, by possibility, they counteract the conservative and restorative movements of the economy, and therefore, injure and destroy, rather than accomplish the good, he desires.

ARTICLE III.—*Selections from Surgical Notes.* By PROF. GUNN.

Abscess—Simulating Malignant Growth.—The cases here selected derive their chief interest from the idea conveyed in the head, under which I have chosen to couple them. In the first, I was completely at fault in diagnosis, as were the intelligent gentlemen who had preceded me in the examination; in the second, exploration alone, confirmed what I will not pretend to call my *diagnosis*, for in fact it was only what I may perhaps term a *hopeful surmise.*

CASE I. On the tenth of May, 1856, Dr. J. A. Brown of this city brought to my office a little patient only four months of age. The left thigh was involved in an apparently diseased mass which extended from the groin to the knee, projecting more in front than elsewhere, preseting a lobulated form, with a highly vascular, tense, attenuated and shining condition of the integument. The mass was elastic, and had been growing since the child was three or four weeks of age. These characteristics, together with the puny appearance of the child left no doubt in my mind as to the medullary character of the growth. The same view was entertained not only by Dr. Brown, but by Dr. Louis Davenport who had also examined the case. I remarked however to Dr. B. that we would explore the mass, and on introducing the exploring needle, laudable pus issued from the wound. I then opened the abscess and evacuated the pus; the *tumor* collapsed and the

skin resumed its natural appearance. The patient was from Canada and I have never heard from it since.

Case II. Mrs. R. S., age about thirty, also suffering from a disease of the left thigh, I saw for the first time on the 27th Nov., 1856. The limb was much enlarged from the groin to the knee, and like the preceding case, projected more in front than laterally or posteriorly. The mass, which was elastic to the touch, was smooth and uniform in its outline, as though the adventitious matter was bound down by the fascia lata, and the skin was vascular, attenuated and shining. It was the seat of a dull heavy, though not severe pain, alternating with that of a transient and lancinating character. The patient was much emaciated and worn down by months of suffering from the disease, and so strikingly did the history of the case portray the rise and progress of medullary cancer, that her former attendant had communicated his convictions to the husband and read to him a description of that disease. I was then called to the case, found it as above stated, and in the elasticity of the growth, detected that faint fluctuation which characterizes a fluid *greatly distending* the walls of the cavity in which it is confined. This obscure fluctuation led me to hope for the presence of pus, though the history of the case and aspect of the patient indicated anything else. The exploring needle realized my hopes, the matter was evacuated, and the patient has fully recovered.

87 *Shelby street, June* 6, 1857.

Article IV.—*On the Occurrence of Vegetable Organisms (Fungi) in Acid and Saline Solutions.* By Henry Erni, Professor of Chemistry and Pharmacy in the University of Vermont.

It is an authenticated fact, that while certain poisons prevent the propagation and development of particular species of Fungi, other species seem to flourish well under the same circumstances, and hence are found in liquids containing Arsenious Acid and its salts, salts of Mercury, organic and mineral acids. Every attentive observer has seen that solutions of Tartaric Acid in laboratories become mouldy, even when kept in glass-stopped bottles; also dilute Acetic acid (vinegar).

I believe I have noticed it sometimes in dilute Oxalic acid. In proportion as these Fungi propagate, the acid disappears, and a mere watery liquid remains. In a series of experiments on the cause of fermentation (published in the proceedings of the American Scientific Association, New Haven, for 1851) wherein Saccharine liquids were mixed with various poisonous compounds, the author witnessed, that whilst Arsenious Acid, Salts of Mercury and Copper,—even Oil of Turpentine, destroyed the yeast Fungus, other species of Fungi, for instance, accumulated at times around solid pieces of Arsenious Acid.

In the water of the Alabama, Genesee County (New York) Mineral Spring, which I analyzed, and which from its containing a considerable quantity of free Sulphuric Acid, tastes sharply acid, were found certain forms of Fungi.

Small quantities of Creosote are found to be among the most active preventives of vegetable organisms, in any kind of solution, Salts of Chromium (Chromate of Potassa) never mould, and hence may well be used in a dilute form to preserve Anotomical (Albuminous) preparations, such as brain, &c.

Dr. Goadby, who has for many years devoted much attention to this subject has found from observation that a *saturated* solution of the Bichloride of Mercury (Corrosive Sublimate) will vegetate; but used in greatly diluted quantities vegetation appears impossible. That from upwards of twenty years experience in the use of almost infinitismal proportions of this Salt, combined with other agents, in all climates, he has never known a single instance of vegetation to occur.

There is no substance more liable to vegetate than flour paste, and yet the doctor has kept his pot of paste for years free from vegetation by a couple of grains of Corrosive Sublimate, and therefore regards this Salt of Mercury,—*properly diluted*,—as an exception.

R.

ARTICLE V.—*Case of Poisoning by Strychnine.* By A. R. TERRY, M.D.

In the summer of 1845, I was called on board the steamer E———, about half past eight o'clock in the morning, in great haste.

On my arrival, I found a middle-aged man lying on the

floor of the cabin on deck, and a physician, who had arrived a moment before, in attendance. The man stated that he had taken, just before breakfast, about half a teaspoonfull of *strychnine*, and (after eating) as much more. He showed a bottle marked "*Sulphate of Strychnine*, 1 *drachm*" from which at least one third part had been taken, and said that he had bought and opened the bottle himself.

My friend, the physician first in attendance, would not believe that he had taken the poison, as the quantity alledged was so enormous and no tetanic spasms had yet occurred; and he looked on it as the hallucination of a crazy man.

We gave him, within a minute of my arrival, a drachm of Ipecac, which I had in my pocket. As the steamer was on the point of sailing, the patient was removed on a litter, to a small tavern a few yards distant, and laid on a bed, without undressing him. He had been lying there from three to four minutes, and I was mixing some mustard for an emetic, when he suddenly threw up his arms, as if to keep off some fearful spectre, his face assumed a look of terror I have never seen equalled, and he shouted "It is coming, it is coming!" and was apparently dead in ten seconds. The convulsion arrested the action of the heart and respiratory muscles almost instantly, and the body was left drawn back from head to heels, and as rigid as a bar of iron. The eyes were wide open, and the pupils dilated to their utmost extent, giving an expression of indescribable horror to them. This expression of the face remained for some hours after death, but as the muscles generally relaxed it disappeared.

In the last and sole convulsion, there were no contractions and relaxations, but every muscle was apparently contracted to its utmost,—life being as effectually extinguished as if he had been suddenly transmuted to stone.

I give this as a case where the action of the poison had probably been retarded by the taking of food immediately after the first dose, and immediately before the second.

I will remark that when I first saw the patient, there was a slight starting or twitching of the tendons at the wrist, as in incipient *subsultus tendinum*.

There were reasons why no autopsy to ascertain the condition of the brain and spinal marrow could be had.

I have recently seen that the inhalation of Chloroform has been employed in cases of poisoning from Strychnine. On pathological grounds I should look for benefit from its use. That the immediate cause of death is from arrestation of the action of the heart and respiratory muscles appears certain; and this from *tonic spasm.* Now if an agent like Chloroform will counteract this *spasm* and allow circulation and respiration to go on until the nervous centres have recovered from the effects of the poison, it appears reasonable to expect a recovery.

The well-known case of the ass poisoned by the *Wourari*, (which seems to belong to the paralysing narcotics, such as Prussic Acid) may be held to have some bearing on the question. In this case, life was prolonged by artificial respiration until the muscles had resumed their functions, and the animal recovered.

In the case of poisoning by *Wourari* it was necessary to keep up respiration until the paralysed muscles had recovered their tone, and the effect of the poison had passed off.

In poisoning by Strychnine, an opposite effect is to be produced; the spastic condition is to be counteracted, and no agent seems to me to be as likely to answer the indication as Chloroform. Were *safe* doses of Prussic Acid prompt enough in their effect, good results might be expected from its use. But the Acid of the Pharmaceutists is so variable in strength, that in sudden emergencies, we have to choose between the dangers of an over dose and one entirely insufficient. This is not meant as finding fault with the Pharmaceutists,—but the Acid is so prone to decomposition, that, no matter how carefully it may be prepared, the strength is liable to variation.

It may be objected to the Chloroform treatment in poisoning by strychnine, that the contractions of the womb are not interfered with, by its exhibition in parturition. But in answer, it may be said, that it certainly does exert a depressing influence on the muscles of circulation and respiration. I think the subject worthy of investigation, and I hope to have some light on it from experiments on brutes, which I am about to institute.

In this connection it may not be out of place to speak of the facilities which evil-disposed persons have to procure deadly

poisons. Druggists and Apothecaries (as a general rule) sell the most active poisons to anybody and everybody who may choose to buy them. I could refer to recent cases where they have been sold under circumstances of gross carelessness; but I refrain, from the conviction that the attention of the sellers had not been called to the probable effects of such want of consideration.

The cheapness of one of the most active poisons (strychnine) puts it within the power of any wretch who can command a half dime to poison two better men than himself. A Troy ounce (480 grains) of strychnine can be bought at wholesale for $3.50—enough to fatally poison five hundred men. That, among our Apothecaries, there are some honorable exceptions to the general recklessness, I am well aware, and they will reap the deserved reward of their upright conduct.

Legislative interference is absolutely imperative to check this dealing out of Death by the dose.

Bibliographical Record.

Medical Notes and Reflections. By Henry Holland, Bart., M.D., F.R.S., etc., etc., Fellow of the Royal College of Physicians, Physician to the Queen, and Physician in ordinary to his Royal Highness Prince Albert. From the third London edition, Philadelphia. Blanchard & Lea, 1857.

With books, as with men, there is a something rather difficult to define, at times, however readily cognizable, distinctly felt, and easily described, which, on early acquaintance interests us and calls forth a desire for greater intimacy or offends and repels us, and inspires aversion, not unfrequently amounting to hatred or contempt..

With respect to the latter, (men) it may be, nay generally is, an ease and delicacy, a gracefulness and benignity of manner; unmistakable indications, often equivalent to evidence of commanding talents and superior attainments, an engaging suaviter in modo, or, under particular circumstances, the fortiter in re. It may be neither the one nor the other, separately, nor all of these collectively, but the entire assemblage,—the tout en semble of all that constitutes, the *character* and the *man*. As regards the former (books) it is not less, ease and grace of language; beauty both of idea and composition, accompanied by force of reasoning, appropriateness of terms and phrases, and acu-

rate logical deduction, evincing a high order of intellect in the author and marks of correct mental and moral discipline. It may be neither of these standing out prominently, and commanding our approval and regard, nor even *these*, collectively, but a happy combination of whatever belongs to style, to philosophy and learned argumentation, equivalent to a delighting suaviter in modo, associated with strength and boldness, quite tantamount to the fortiter in re,—a general character, a tout ensemble of everything in composition that is agreeable instructive and thereforce convincing. Books too, like men, amuse or enlighten us, are agreeable and profitable, or the contrary to some extent, as we are constituted, mentally and morally ; in a word, as our tastes and innate predilections, and, consequently, as we become intersted and allow ourselves to associate with them on terms of intimacy and equality—in a measure, as we respect them and appreciate their contents.

There seem to be,i n regard to men, certain natural relations or affinities, by which individuals are drawn together, as there are equally natural aversions and repulsive influences, which keep them asunder. The former may consist of congeniality of sentiments and principles ; of purposes aimed at, or accomplished ; of similarity of education and habits, as also of condition and position in society, and a thousand undescribed features or lineaments of person, manner and character. The latter of the converse,—the negative merely of all these. So, in reference to books, certain qualities attract, while certain others repel us. In the first instance, the attractive, the engaging qualities may be quite analagous to those, which give rise to the affinities of friendship among men. In the last, the repulsive traits or qualities may consist of mere negations of the first, or of something positive, in no sense differing in its influence upon the mind from an obvious, tangible deformity. The work before us presents many points of attraction, with as few perhaps that are repulsive, as can be expected to attach to any of the productions of man. One of the attractive qualities is found in the fact that it is the offspring of experience, which is but another name for extended and careful observation. Certainly, if we concede that the author is possessed of a sound physical and mental organization, and that he enjoyed the advantages of accurate and extensive educational training ; and moreover, if we allow him to have been actuated by honesty of purpose and a laudable desire to enlarge the sphere and improve the character of scientific medicine, we must also concede that thirty-six years of laborious practice in an immense metropolis, where Schools of Medicine, Hospitals, Infirmaries, and learned men abound, must have qualified him pre-eminently for the task he assumed.

But whatever opinion the reader may be inclined to predicate upon the above suggestions, as regards the author's fitness for the work he has accomplished, it is believed all doubts will be dispeled from his mind when he considers, that during most of the long period to which we have referred, Dr. H. has "been accustomed to preserve notices, not merely of particular cases, but also of such general reflections as were suggested to him, by actual observation." In the construction of the present edition it will be observed by those who are familiar with the two preceding, that considerable changes have been made, as well in reference to the matter, as to the arrangement of the chapters. Portions have been removed from this, and reserved for "another volume, under the title of Chapters on Mental Physiology," while other portions have been added, with the view of imparting more of "unity and completeness to the treatment of the subject." Further, it has been sought "in the present edition, to bring the chapters more into series, as regards the relation of their subjects, and to associate certain pathological principles," with "various morbid conditions, not usually thus connected in our systems of nosology."

It will be observed, therefore, that whilst the author has been intent on the promulgation of truth, he has not been regardless of method, but has sought so to arrange and associate the various topics treated of, as to enable the reader to perceive and comprehend the whole, with the least amount of labor. The work, with much appropriateness, begins with an essay on "Medical Evidence," than which no subject in the whole field of professional research, is more important, scarcely so essential to the elucidation of principles and the promulgation of scientific truth, nor perhaps so universally overlooked or neglected. In the progress of his remarks on this subject, when speaking of the importance of the "advantage" possessed by the profession now, derived from the "application" of the "numerical methods and averages to the history of disease," and certain difficulties connected with the prosecution of medical investigations, he observes, "In looking further to the chance of overcoming these difficulties in the future, regard must be had to the principle now verified in many cases, that, in proportion to the complexity of phenome na, is augmented, also the number of relations in which they may be surveyed and made the subjects of experiment. The application of this principle to medical science, is every day becoming more apparent. Every new path of physical knowledge opened, each single fact discovered, has given guidance more or less direct, towards the objects still unattained in physiology and the treatment of disease."

He next proceeds to the consideration of "Hereditary disease,"—a subject certainly of much difficulty and too often made the scape-

goat of ignorance, if not of culpable idleness. On this obscure topic he remarks, as a fundamental proposition, that, "one general fact, as respects man, seems to be that so ably developed by Dr. Prichard; viz: that all original or connate bodily peculiarities tend to become hereditary; while changes in the organic structure of the individnal from external causes during life commonly end with him, and have no certain influence on his progeny." Speaking of the "researches into what has been termed Embryology and the theory of types," originated strictly by "Hervey & Hunter," and the "boldness or even rashness of some of the generalizations attempted, particularly in the doctrine of fundamental unity of structure and design," of certain French and German writers, he observes—"I have never, as already stated, seen cause to think the arguments of natural theology at all affected by these inquiries, even when pushed to the speculations of a primitive germ or original unity of type. Its truths are indeed, far above the reach of what after all, are but subordinate researches, even if they could, by possibility attain the proofs of what these terms express. The chain is lengthened and its parts are connected together by new and unexpected links. But still it is a chain of designed organization throughout, and if we simplify the first of these links, it is but to render more wonderful the number and perfection of the varieties which are evolved, in definite forms from this elementary structure."

Thus it will be perceived, however apparently infidel and incompatible with revelation, the doctrines alluded to, when philosophically construed, they but add breadth and scope to the fundamental principles of Natural Theology; they confirm and enlarge the great and noble doctrine of design. In reference to what is accepted with regard to hereditary taint, or tendency to disease, the writer has enriched his essay by a succinct statement of many pertinent examples which are drawn from his own ample observation. Next to the chapters, from which we have already offered examples of the writer's style of composition and modes of thinking, succeed many others, on subjects not generally treated of, at much length by systematic writers, and with respect to which the reader is often at a loss to find as full and satisfactory information as he desires. A few of them may be mentioned, in the order in which they appear in the table of contents: "Methods of Inquiry, as to Contagion; On Diseases commonly occuring but once in life; On the connection and classification of certain diseases; On disturbed balance of circulation and metastasis of disease; On the influence of weather, in relation to disease, etc. These severally will be conceded to present fruitful fields of research, involving principles of great practical importance, as well as elementary

doctrines in physiology. Interspersed among the remaining chapters of the book, others will be found, relating to matters not commonly dwelt upon in detail, by authors on practice, nor yet to considerable extent in works on pathology. Among these we would call attention to that on pain as a symptom of disease, and to those also which are devoted to the consideration "of points where a patient may judge for himself; to methods of prescription; to some supposed diseases of the spine; the exercise of respiration; some points in the pathology of the colon; the abuse of purgative medicines; bleeding in affections of the brain, and that on the use of diluents, all of which abound in intelligent practical deductions, and learned physiological suggestions. The remaining portions of the work are devoted more particularly to topics and diseases, to which medical writers have generally given a larger share of attention than to the preceding; more of every day occurrence and observation and with which of consequence, physicians are more familiar.

The last chapter, however, contemplates "the hypothesis of animalcule life, as a cause of disease, and particularly as connected with cholera, the whole being closed with appropriate concluding remarks. It gives us pleasure to add our testimony to the merits of the work, and cheerfully to recommend it to the careful perusal of all who desire reliable information on numerous points of great practical importance. To be found at Raymond & Sellecks, in this city. K.

A Claim of Priority in the Discovery and Naming of the Excito-Secretory System of Nerves. By HENRY FRAZER CAMPBELL, M.D., Prof. &c. pp. 18.

This little pamphlet consists of a letter written to Marshall Hall, claiming the priority expressed in its title. It was called forth by an article in the London Lancet from the distinguished physiologist above named, formally calling attention to the discovery and naming of this system of nerves. Dr. Campbell has for the last few years been investigating this subject and has duly recorded his observations and conclusions in such a manner as to give certainty to the claim which he now makes. There is little doubt of his receiving due credit at the hands of one who can so well afford to be just, as can Marshall Hall. The letter is characterized by firmness and modesty, and reflects great credit upon the author, for qualities which spring from the heart, as well as those which evince the ripened intellect. G.

Spirit of the Medical Press.

The Danger of all Attempts at Artificial Respiration, Except in the Prone Position. By MARSHALL HALL, M.D., F.R.S., &c., of the Institute of France, etc.—

I have shown, in a previous paper, not the inutility only, but the *danger* of the *warm bath* in the treatment of apnœa or asphyxia, except in the *prone* position.

If the asphyxiated patient be moved and placed in the supine position, in which no attempts at artificial respiration can be effectually made, what is the condition of the rima glottidis, or entrance into the windpipe? Is it *free*, so that air may be pressed or drawn into it? And if apparently free, does it remain so at the moment when an effort to force or draw air into it is made?

1. Is the tongue so securely situated, all muscular energy having ceased, as neither to *fall* backwards nor to be *drawn* backwards, and so close or obstruct the orifice and entrance into the windpipe?

2. Is there no accumulation of mucus, or other animal fluid, or of fluids from regurgitation from the stomach, which may also obstruct the glottis? nay, more, which may be forced or drawn into the windpipe, inducing a *second* and fatal suffocation?

No one can say *a priori*, that one, or even both of those events may not occur. These are not only possible, but probable,—not *only* probable, but inevitable under certain circumstances.

There is one fact of the utmost importance. When, from any circumstances, the nervous and muscular powers are in abeyance, nothing is so common as regurgitation from the stomach, from change of position, compression, &c. Under such circumstances, compression of the sides of the thorax would certainly be apt to produce this effect. Now, in the supine position, the matters so regurgitated would remain in the fauces, obstruct the glottis, or; when the pressure was removed, be drawn into the windpipe. Leroy's mode of attempting to effect artificial respiration, of which a sketch is given by the Royal Humane Society in its reports, is utterly ineffectual; but, if effectual, would be replete with danger. The only certain safeguard against such a fatal accident is—*the prone position.* In this position, the tongue tends to fall forwards, and all fluids flow from the fauces and the mouth, or are expelled by the first induced expiration.

All this is reasonable, *a priori.* But we must not rest here. Our appeal must be to *facts*, not to mere notions. The facts must be ascertained by careful examination of the dead subject.

1. What *is* the position of the *tongue* when the body has been roughly moved about and laid in the supine position, all cadaveric rigidity of the parts being overcome by previous movement of this organ backwards and forwards?

2. What is the further position of the tongue in the supine position, at

the moment of attempted inspiration, first, by means of the bellows, or, secondly, by the removal of the pressure on the ribs or sternum, and the consequent dilation of the thorax?

These facts may be ascertained by removing the tissues on one side of the neck. so as to give a lateral view of the tongue, glottis, epiglottis, and pharynx, and by replacing them by a portion of transparent glass of the proper size and form, properly placed and carefully maintained in its position.

The first part of this examination has been already made: The subject being placed in the supine position, and the lateral parts of the neck being removed, so as to admit of observing the relative position of the internal organs—the tongue, the glottis, the epiglottis, the pharynx,—it was seen that obstruction to the entrance of air actually *did* take place.

I now propose to place a piece of transparent glass so as accurately to close the cavity and allow of the observation, first, of the effect of *position*, the supine and the prone comparatively, and then of any attempt to induce *inspiration*.

A similar examination of this internal in reference to fluids present in it (and we never can know when such fluids are present) is unnecessary: fluids will gravitate to the lowest parts of a cavity, and will be drawn into an open orifice, such as the glottis, under the influence of air forced or inhaled into it. And such an event not only renders all attempts at *in*spiration nugatory, but induces a permanent because material obstruction of the entrance in the windpipe.

In confirmation of these views I again appeal to experimental *facts*:—

"The following experiment has been repeated *many times*, and has been witnessed by George Webster, jun., Esq., of Dulwich; Mr. Williams, superintendent of the Royal Humane Society, Hyde-Park; and other gentlemen:

"The dead subject being placed in the *supine* position, and pressure made on the sternum and ribs, a little gurgling was heard in the throat; but, the pressure being removed, there was *no* evidence of *in*spiration."

Now let us contrast with these abortive attempts to induce artificial *in*spiration in the *supine* position, the beautiful and life-giving results—*in*spiration and *ex*piration—of alternate rotation from the *prone* position and ropronation. I continue the quotation:

"The subject being then turned into the *prone* position, and pressure being made on the spine and the ribs, and removed as before, there were free expiration and *in*spiration."

Far more marked is the effect of pronation and rotation:

"The subject was turned into the prone position: considerable expiration took place, which was much augmented by pressure of the hands on the back. On removing this pressure a little inspiration took place. The body being then rotated on the right side, considerable inspiration again took place, whilst moving through one fourth of a circle; on continuing the rotation, inspiration continued until the shoulder was half-way between the lateral position and the table, when it ceased."

These are the original experiments. They are extracted from a little pamphlet entitled "Abstract of an Investigation into Asphyxia," &c., and now out of print.

I conclude by observing that the principle of *prone respiration* is of such importance as to demand a new designation to impress it on the attention and the memory: I propose to term it PRENOPNŒA.

The number of cases of apnœa and asphyxia, the effects of *chloroform*, which have been arrested by the "Ready Method," and of which I have received authentic details, now amounts to *three*. The last of these was communicated to me by an eye-witness of the operatiou, which consisted in tenotomy in a little boy, aged about four, under the influence of the anæsthetic; suddenly the child turned pale and ceased to breathe, and looked as if it were dead. Cold water was dashed on the face, and other ordinary measures were adopted utterly in vain. The Ready Method was now instantly adopted and efficiently applied: after the first inspiration produced by rotation after pronation with pressure, the mouth was observed to open and air to be inspired; the movements were repeated, physiological respiration commenced, the little boy cried, and all was safe.

I conclude the momentous subject by several *aphorisms* in regard to the treatment of asphyxia:—

1. The effects of suspended respiration can only be removed by the renewal of respiration.

2. Artificial respiration can only be certainly, effectually, and safely performed in the PRONE position; for,

3. In the *supine* position the larynx is apt to be obstructed by the falling back of the tongue and epiglottis, or by the accumulation of fluids already in the mouth or regurgitated from the stomach.

4. These fluids may be fatally inhaled into the windpipe when *in*spiration is mechanically effected.

5. All other measures are subsidiary, even the rubbing the limbs with pressure upwards; and all which exclude respiration are, *ipso facto*, destructive; the *warm bath* is of *doubly fatal* tendency,—first, by excluding pronation and rotation, and secondly, by promoting the formation and the circulation of the blood-poison—carbonic acid.—*London Lancet.*

Mr. T. P. Teale, of Leeds, reports a *Case of Detached Piece of Articular Cartilage, existing as a Loose Substance in the Knee-Joint.*—The patient was a man, aged thirty-seven, in whom, from an injury of the knee, a portion of the articular cartilage from the lower end of the femur, about an inch in diameter, became detached as a loose body. Fourteen months after the accident, this loose body was removed by direct incision. The operation proved fatal, and there was found after death, on the under surface of the inner condyle, a depression, exactly corresponding to the body which had been removed.——*British and For. Med. Chi. Review.*

Anatomy of the Pleura. Dr. Charles E. Isaacs, Demonstrator of Anatomy in the University Medical College, read an instructive paper on the Anatomy of the Pleura.

The object of this investigation was to determine the extent of the pleura above the clavicle, and its relations to important organs. Writers on anatomy either do not allude to the subject, or speak so vaguely, as to convey the impression that no definite knowledge exists in regard to it. Horner says the pleura extends higher at the head of the first rib than at its anterior extremity; according to Cruveilhier, the pleura projects more or less above that rib; Sharpey and Quain state that it extends an inch, or even an inch and a half, above the first rib. Harrison says when the lung is distended, the pleura may rise two inches above the first rib, etc., etc.

The statements of many other authors are given, all of which are equally indefinite, while in such works as the *Encyclopedia of Anatomy*, *Bourgery and Jacob*, *Sibson's Medical Anatomy*, etc., no mention whatever is made of the extent of the pleura above the clavcicle.

Struck with the discrepancies on this subject among authors, and aware from repeated dissections of the great hight to which the pleura sometimes extends, Dr. Isaacs was led to the careful examination of a large number of cadavers (one hundred in all), to determine if possible, the superior boundaries of this investing membrane.

The method pursued was, to place the subject upon a firm table, and after exposing the thoracic cavity in the usual manner, by the introduction of one hand into the cul-de-sac formed by the pleura above the clavicle, its boundaries could be readily ascertained externally. Where this method failed, needles were passed from without inwards, at points where it was desired to obtain measurements, and their position in the cavity determined, by the fingers introduced internally.

It was sought to establish the following points:

1. The hight of the sternal edge of the pleura above the clavicle.
2. The hight of its central portion.
3. The hight of its outer edge.
4. The distance of the sternal edge from the median line.
5. The distance of the outer edge from the median line.

In presecuting this examination, it was discovered that the upper part of the pleural cavity did not always present a dome-shaped form, as described by anatomists, but that it sometimes forms cul-de-sacs, extending upward like the fingers of a glove; they are sometimes prolonged laterally, from the right pleura across the median lide to the left side, and pass upwards between the bodies of the cervical vertebræ and œsophagus, or, between the latter and the trachea.

Dr. Isaacs peesented several tables exhibiting the results of his investigations, of which we notice the following:

Comparative highth and width of the pleura above the clavicle in the male and female, calculated from the measurements in forty-seven females. The conclusions at which he arrives are, that the pleura is both higher

above the clavicle, and wider in that situation, in the male than it is in the female.

The high extent of the pleura.—In one hundred cases, the pleura of the right side rose *two inches and upwards* above the clavicle in fourteen; on the left in four; on both sides in five; in all twenty-three, giving the proportion of nearly one in four having a high extent of pleura.

Low extent of the pleura.—In five of the one hundred cases, the pleura did not rise above the superior margin of the clavicle; being one in twenty having a low extent of pleura. The sternal or inner edge of the pleura on the right side extended across and to the left of the median line in eleven cases, the greatest extent being one and one-fourth inches.

These eleven cases necessarily gave the widest extent of pleura at its superior part, the average width being four inches. It is worthy of note that this projection of the pleura across the median line was never observed on the left side.

It was, also, generally noticed that, where the pleura extended high, the subject had a long neck, and the reverse was the case in short, and especially bull-necked subjects; in twelve cases marked as having long necks, ten had a high extent of pleura; in eleven short-necked subjects, the pleura was very low in three, below the average in eight. By the shape of the neck, therefore, and probably by auscultation and percussion, it may be possible to determine pretty accurately in the living subject whether the pleura has a high or low degree.

The practical importance of this determination of the limits of the superior portion of the pleura is obvious. To the physician, it is important to know these facts in the practice of auscultation and percussion, and in the diagnosis of diseases of the apex and the lungs. To the surgeon this knowledge is of great value in the removal tumors, and in other operations about the neck.

Dr. Isaacs ingeniously suggests that cases of sudden death during operations about the lower part of the neck, from the supposed entrance of air into the veins, may be due to the opening of the pleural cavity. If the surgeon penetrated the neck two inches above the clavicle, it would have been thought that there was no danger of wounding the pleura, and yet the result of these measurements show that the pleural cavity could be opened at this hight. These facts are, also, important in the prognosis and treatment of wounds in the neck.

In the second portion of his paper, Dr. Isaacs considers the surgical anatomy of the upper portion of the pleural sac, or its relation with the subclavian artery.

In its first division, or that portion of the artery lying within the scaleni muscles, the subclavian always rests upon the pleura. The artery has never been successfully ligatured at this point. though the operation has been performed nine times upon the right side, and once upon the left. The failure is due to the extension of the disease to the coats of the subclavian, and the proximity of the ligature to important anastomosing branches.

The second portion of the artery, or that lying between the scaleni, is,

also, always in contact with the pleura. The ligature has been successfully applied at this point.

The third division, extending from the scaleni to the first rib, is that portion of the artery which is most frequently ligated, and is, therefore, relatively, of the most importance, although the subclavian in this part of its course does not rest upon the pleura, yet, when the pleura rises high in the neck, it carries the artery with it; in the twenty-three cases in which the pleura rose high in the neck, the artery was high in the third portion of its course, and rested upon the pleura for a considerable extent, several examples are given to illustrate this fact. A knowledge of this relation of the pleura to the subclavian artery at the point where it is most frequently ligated, is of great importance to the surgeon.

This interesting paper will soon appear in the transactions of the Academy.—*N. Y. Journal of Medicine.*

Suicidal Monomania.—Psychology, connected with and deducible from physiology, is beginning to be better understood, and to take its proper place in general literature, and especially in biography and history. We may adduce among other instances the following observations by Mr. Masson, Prof. of English Literature in University College, London in his "Life of Chatterton." The author had just before been speaking of young Chatterton's concious sense of great injustice in passing off his own effusions as those of the Monk Rowley of the fifteenth century, whose manuscripts, forged by Chatterton himself, the latter professes to have discovered.

"After all, however, the most material fact in the case remains to be told. Physical causes were at work. Bereft of the amount of actual food. and of other comforts, necessary even with his abstemious habits, to keep body and soul healthily together; wandering about London in a perpetual state of fever and excitement; returning home to write night after night—without rest or sleep—little wonder if he had overstrained his physical capabilities, and if brain and nerve began to fail in their office. Whatever taint of hereditary insanity was in him, derived from the old line of sextons who had jingled in past generations, the keys of St. Mary's Church in Bristol, and walked at midnight through its aisles, and dug the graves of its parishioners, or derived more immediately, from that drunken wild-eyed father, whom he had never seen, but who used to tell his tavern-companions that he believed in Corneilus Agrippa, the necromancer; it had now, at last, come out in a way not to be mistaken. From his childhood there has been symptoms of it; his fits of weeping; his sudden paroxysm of passion; his long reveries, when he gazed at people, with seeming to see them; his frequent muttering aloud. Not till now, however, had these traits passed the limits of what could be considered compatible with sanity. But now, almost certainly, these limits were passed. Noticing the strange haggard lad, walking about the streets, muttering, perhaps, to himself, or making sudden gestures, or looking at what was passing sometimes ascantly, and sometimes with glances unsually keen and bright: even strangers could not but follow

him with their eyes, and wonder who he was, and where he came from. Had the stranger been one accustomed to the ways of the insane, he would, probably, at once have pronounced that his brain was affected. And had the stranger been able, with this idea in his mind. to pursue his inquiries farther, so as to ascertain what peculiar form or species of insanity had taken posession of him, he would have found that it was that which physicians recognize as the suicidal tendency. Physicians, as all know, do recognize this as a form of madness ; and though they allow, that a perfectly sane man may commit suicide after deliberately reasoning on the point, they attribute a large proportion of the suicides to the action of a certain specific impulse which reason cannot overcome. In Chatterton's case, as we have seen, there has been premonitory appearances of the existence of this tendency. The idea of suicide had from the first been familiar to him."

Our commiseration for the untimely end of this unfortunate youth must not, however, blind us to the false pride and waywardness of his nature, which, more than actual necessity, subjected him to the gnawing of hunger and combined with the latter to derange a morbidly sensitive brain, and drive its possessor to self-destruction. The act of the suicide may be the result of a fit of temporary insanity, but no palliation of this nature ought to be adduced for the often habitually wicked disregard of moral and natural laws, and the voluntary nursing a belief in the venial nature of the crime of self-murder, if not in the actual right that a man has thus to dispose of himself. The judgment warped by such wretched sophistry, any slight annoyance, whether bodily pain, mental excitation, or disappointment, will serve as an excuse for the commission of suicide. Chatterton wanted "the resources to be found in rectitude and gentleness of a mere worldly character." Religion he had none. Professor Masson, in reference to the state of destitution to which the young poet was reduced in London, where he had gone with the hopes of bettering his fortune, makes the following judicious remarks- They contain a lesson good for all times ;

"Quiet, plain scholars have lived, before now, in German or in Scotch university towns, on boiled peas-cods for months, on a single guinea a quarter, earned by teaching, without saying much about it. Had youths of this type been in Chatterton's place in London, in Agust, 1770, they would most probably have survived the crisis. They would have availed themselves gratefully, and yet honestly, of such small imediate aid as those aunts and other relatives, that we hear of so slghtly in Chatterton's letters (one of them, a carpenter, who had married one of his aunts) might, perhaps, though poor, have willingly offered at the sharpest moment of the emergency ; and even failing that, they would have conquered by sheer patience. How was it then in Chatterton's case, 'the comforts of Christianity' being placed out of the question?"—*North Am. Med.-Chi. Review.*

On the Valvular Nature of Strangulated Hernia.—Incarcerated hernia, in Prof. Roser's opinion, essentially depends upon a valvular mechanism. The obstruction of the contents of the intestine in the incarcerated portion arises from the folds of the mucous membrane lying valve-like

against each other, and preventing the passage of gas, fluids, &c. Looking at the complete obstruction which takes place in the hernia, one might suppose that the parts concerned are compressed as closely as in an artery when tied. But all observation teaches us that no such pressure is here exerted; for while the venous circulation is only partially arrested, the arterial remains uninterrupted. Were it otherwise, indeed, the intestinal fold would become rapidly gangrenous. The question is why, if there is space enough to allow of the circulation in the part to continue, cannot we by pressure return the contents of the intestine.

The nature of the obstruction may be shown by a simple experiment. If a noose of intestine containing some fluid or air, be brought within a ring about the size of the finger, and then pressure be made upon the apex of the noose so as to force the contents against the compressing body, complete obstruction to their passage will be found to prevail. And yet a catheter may be passed beside the intestine, and, by drawing the latter a little to one side, a considerable space will be perceived. If pressure be made in front of the encircling ring, the contents of the intestine are forced back; but if we press at the end of the noose, the portion that lies next to the ring is forced against the latter, and the canal is closed. If we open the noose on its convex side, and fill it with water, we may observe the valvular disproportion of the intestinal folds, which resemble the valves of the aorta when acting under water.

Deferring to another occasion the exposition of this theory of the taxis deducible from these views, Prof. Roser now points out the support they give to the operation for hernia, without opening the sac—a procedure he regards as one of the greatest improvements in surgery since the days of Pare. He believes it has made little progress in Germany and France, as compared with England, in consequence of the prevalence of a false theory of strangulation of hernia and erroneous ideas on the surgical anatomy of hernia. In respect to the first of these, too exaggerated an idea of the constriction that takes place has been entertained, leading to a belief that the mere dilation of the tendinous margins could not suffice for the return of the distended and indurated hernia. The above experiment, which proves the valvular nature of the obstruction, must surely give more confidence in the efficacy of the external incision. We have not space to follow the author in his description af the anatomy of femoral hernia, and which, indeed, essentially resembles that furnished by Cooper.—*British and For. Med.-Chi. Review.*

Mr. Nathaniel Ward records a case of suicidal incised *Wound of the Abdominal Parieties*, through which there was protrusion of the omentum and transverse colon, and division of the latter to the extent of four-fifths of its circumference. The edges of the wounded bowel were brought into accurate approximation by an uninterrupted suture, and the operation was followed by the administration of opium in large and repeated doses. Perfect recovery took place, the abdominal wound having healed on the thirty-second day after its infliction. The patient was a female lunatic aged fifty-one.—*Ib.*

Auscultation applied to the Diagnosis of Diseases of the Ear.—M. Gendrin has addressed a letter to the Academy of Sciences on the above subject. He says,—Mr. President: all physicians know that it is impossible to define internal lesion of the organ of hearing. I call the attention of the Academy to a mode of exploration which I have resorted to with success during the last ten years. I listen to, by means of a stethoscope, or my ear applied to that of the patient, the sounds which exist in the ear produced by respiration, cough, the voice, labial hissing, &c. I take the precaution to close the nostrils of the patient to make the sounds in the ear more distinct. These sounds being modified by the pathological conditions of the cavities and membranes, afford means of forming a correct diagnosis. In the healthy condition each expiration causes in the ear a low or grave and prolonged blowing sound, which ceases before the cessation of the expiratory movement. If the membrane of the tympanum be perforated, this sound becomes acute, dry, sometimes sibilant, and more prolonged. Should the tube (the eustachian) be contracted, it becomes intermittent, and the expiratory sound is divided into several successive sounds, which accompanies in many cases the crepitant bubbles due to the presence of mucus in the tube and drum. These crepitations are also observed in caries of the internal ear, or of the mastoid cells: when a communication exists between these and the tympanum; but the sounds in these cases are grave and humid. The expiratory concussions in coughing are more distinct and shorter, and concussions in coughing are an easier means of detecting anormal sounds produced by the several internal lesions, than simple expiratory sounds.

Inspiration can scarcely be heard in well cases; but if the tympanum be perforated, the tube remaining permeable, during inspiration, a decidedly acute sibilant mixed with crepitations, of which the patient himself is often conscious, is perceived.

The sound of the voice heard in the ear, appears more grave and a little vibrating, it is interrupted by frequent intermissions, which separate the words and even the syllables. When the tube is obstructed or the drum occupied with mucus, it degenerates into a confused and inarticulate murmur. The same phenomena are produced by pus or by central exostosis of the bone. It is cut short by closure of the tube. It is whistling and accompanied with crepitating bubbles, when the membrana tympani is ruptured.

In health, the labial whistle is transmitted through the middle ear as a sharp blowing, coming from a distance. It arrives feebly, is divided by short intervals of silence, or nearly mute when the tube is strictured, and is quite inaudible in obstructions of the tube. On the contrary when the membrane is destroyed, the tube remaining previous, the whistle becomes very acute, and appears near; it sounds as if the patient whistled in the physician's ear.

In most cases, anormal sounds may be verified by comparing the sounds of one ear with the other; for it is very uncommon to find both sides affected in the same degree with the same lesion.—*Revue Therapeutique.*

We may add to the above, that during several years, eight or ten, we

have been in the habit of resorting to auscultation in making out our diagnosis of internal diseases of the ear. We do not use the stethoscope, but apply the ear directly to the ear of the patient, or use the otoscope which in some cases is better. Drs. Toynbee, Williams and others of England have been for several years using the otoscope, with which to learn the conditions of the eustachian tube. We sincerely hope that the profession in our own country will wake up to the importance of Aural Surgery. We delivered courses of lectures on the subject, both in one of our medical colleges and in private for several years, and published a book, which the great publishers of our city refused, because they could get the English books on the subject for nothing, and doubtless because also, these were better and more marketable. Would it not look a little more liberal on their part to encourage American authorship in this line; and will not the young men now entering on the medical arena take up the gauntlet on this subject, and study more fully the diseases of the Ears, and thus stop another great avenue for quackery and imposture?—(Ed.)—*Philadelphia Med. and Surg. Journal.*

On Myeloid and Myelo-Cystic Tumors of Bone; their Structure, Pathology, and Mode of Diagnosis. By Henry Gray, F.R.S.—This is a very valuable contribution to our knowledge of a class of tumors which have but recently received attention. These tumors were first distinguished by Lebert, and by him named *fibro-plastic*, and more lately they have been described by Mr. Paget under the title of *myeloid*, from the resemblance of their microscopic constituents to those of the marrow and diploe of the bones, especially in the fœtus and in early life.

Mr. Gray publishes the details of nine cases of this disease, and gives the following summary result of his observations:—

"1st. That the essential element consists, in all cases, of forms precisely similar to what is found in the marrow and other elements of bone, in the fœtus, and at an early period of life; hence the name 'myeloid' tumors. In some instances, however, their structure is so intermixed with cysts, that I would propose the 'myelo-cystic' tumors to be given to them in such cases.

2dly. That these tumors are, for the most part, limited in their development and growth to the osseous tissue, or its investing membranes, the periosteum, and dura mater.

3dly. That they may probably occur in any bone.

4thly. That they occur in all the cases at present recorded at an early period of life, and that their growth is generally much less rapid than that of malignant disease.

5thly. That these tumors are not malignant, and when entirely removed, never return.

6thly. That they present a near relation with fibrous and fibro-cystic tumors, and cartilaginous and osseous." (pp. 124-5.)

Perhaps the most important among these considerations is the question of the malignancy of such tumors. Mr. Gray grounds his belief of their

non-malignancy upon their peculiar structure, distinct from cancer, their slow growth, the complete absence of any affection of the lymphatic glands, and of the malignant cachexia; and upon the fact that the removal of the limb, although in many of these cases *through* the bone in which the disease had originated, was not followed by a return of the disease after many years. It is but right to state, however, that on this matter Mr. Gray differs somewhat from Mr. Paget. The latter, although he admitted that these tumors are "generally of innocent nature," yet believed that in different persons they might pursue "very different courses, appearing in some as an innocent, in others as a malignant disease."* Two cases are recorded by Mr. Paget, presenting the myeloid structure (and neither of which, by the way, originated in bones), in one of which the tumor suppurated, the glands became affected, and the disease returned six months after removal; while in the other, a myeloid tumor of the neck, similar deposits were found after death, in one of the cervical glands and in the lungs.—*Brtish and Foreign Medico-Chirurg. Review.*

History of a Case in which a Cedar Pencil was lodged in the Cavity of the Abdomen for Eight Months. By John Erichsen.—The pencil, which was five and a half inches in length, had been employed by the patient to relieve a difficulty in micturition, but from some interruption had slipped out of her hand, and upon her sitting down, had been forced through the posterior and upper part of the vagina, and become lodged in the abdominal cavity, perforating two coils of the small intestine. In this position it remained for eight months, producing intense pain and repeated attacks of peritontis. The point of the pencil could be felt, midway between the umbilicus and the right Poupart's ligament. An incision was made down upon this point, and the body removed; but the patient died on the fourth day of peritontis. This case resembles in many respects one recorded in the thirty-first volume of the Society's Transactions (p. 315), by Dr. C. W. Lever and Mr. J. Hilton.—*British and For. Med.-Chi. Review.*

Prophylaxis of Puerperal Fever.—It is recommended by a French physician to administer quinine and sub carbonate of iron to lying-in women, who are exposed to the contagion of purperal fever. He prescribes it—eight grains of the former and thirty grains of the latter—daily.

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* Lectures on Surgical Pathology, vol. ii, p. 228.

Editorial and Miscellany.

Popular Lectures on Physiology.—The *Cincinnati Medical Observer*, in its late number, devotes its leading editorial to the administration of a severe, but wholesome and merrited castigation of a pair of lecturers on Popular Physiology, who are sowing broadcast over the country, seed which will spring up and ripen into an abundant harvest of moral degradation. Its sentiments are so in unison with our own feelings, that we would have re-published the article entire, but for the fact that we wish to avoid poluting our pages with the *names* even, of this pair of *un*worthies. Their unmitigated quackery sinks into a matter of minor importance, when viewed beside the influence of their teachings upon the morals of a large portion of their hearers. In this respect, we class them with those who advertise remedies, which "should be *avoided* during pregnancy." That they are eagerly sought after by the masses, is no matter of surprise, for they administer the kind of aliment which proves a sweet morsel to a vitiated and sensual taste; but that they should receive the sanction of educated and honorable medical men, and particularly that the medical press should ever endorse them, is indeed, to us, a cause of real astonishment and regret. The *Observer* says:—"The influence of such lectures is pernicious to those who hear them, and injurious to the confidence which should exist in the public mind in regard to our profession. We should go further and pronounce them corrupting to the morals of the community. Let us illustrate: He delivered a lcture to gentlemen only on the organs of generation of both sexes, and one to ladies only on the same subjects, He gave the theory of generation—the method of conception—the time when a woman is apt to become pregnant, and the manner of avoiding pregnancy.

In the large audiences who heard these lectures, there were many yonng and thoughtless (they won't remain thoughtless long under such teachings.—*Ed. Ind.*) boys and girls, and women and men who, advanced in years, yet are loose in morals. To tell a girl, or boy, or both, that there is little danger of pregnancy from coition for a week or ten days before the menses, is certainly, in our estimation, a sure way of breaking down all purity, and, even more, of producing open licentiousness. In our fashionable civilization, there comes within every medical man's observation, a great amount of corruption. It is no unfrequent thing to be asked for some remedy to prevent pregnancy, and still less so, for some remedy to produce abortion."

In reference to instructing the public in medical matters, we also fully endorse the *Observer;* and in doing so, we confess that our views have undergone a change on this subjet. In the enthusiasm of that period of our professional life, which we must term *medical verdancy*, we were earnest and sanguine in our faith in popular medical training; but we have no longer any confidence in teaching the people a system of physiology, much less, any general theory of cure; it is necessarily, all too imperfect, and realizes the truth of the maxim, that "a little learning is a dangerous thing." In fact, until men within the profession cease to illustrate the same truth, we had better labor within our own ranks. The field is ample, and laborers are not over abundant or industrious. Let us strive to elevate the standard of our acquirement, and leave the public to educate itself. Let us refrain from writing sickening *dilutions* of physiology for popular use, and cease lecturing to youg ladies on their own formation. They will soon find out that they possess a nervous system. Our grandmothers were not afflicted with nerves, but, thank God, they gave evidence of the possession, and *use* of the *chief nervous centre—the brain.* The public needs *rules to follow*, not theories to speculate upon. We quote approvingly still further:—

"We have in our public schools and academies a *little* physiology and anatomy, taught to little boys and girls, with the result of making little fools. So, too, the public who listen to the so called lectures on physiology and phrenology, by traveling humbugs and quacks, are in the main made incurably foolish."

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"No one ever hears of Bernard, Schmidt, Brown-Sequard, Carpenter, or Jackson delivering lectures to the public on any such subjects. We venture the remark that there are not five hundred non-professional persons who would follow a scientific course of physiological lectures for three months. But let some fellow, with more cunning than honesty, come along and lecture on matrimony, love, the organs of generation, pregnancy, etc., and half the town will rush to hear him."

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"Let us think of what our profession once was, and, in refreshing ourselves with this knowledge, we will find that the ripe medical scholar, the profound man of experience and study, and the high-toned gentleman, is far from exhibiting himself to the public in delivering so called lectures on physiology." * * * * *

We appeal to the medical press:—Do not this and other existing evils fall within the range of, and call for editorial comment? Is an

editor's duty *all* performed when he has determined what shall appear on his pages, and passed his judgment on publications? or, is it not editorial privilege,—aye, *duty*, to extend observation and fearless comment over the whole subject of existing evils? We thank the *Observer* for calling attention to this most blighting evil.

G.

Scarlatina.—The mortality among children in Boston during the past year, from the great prevalence of Scarlatina, can hardly find a parallel in the history of that disease in this country. It has also been universally prevalent in most of the northen and western cities. A very practical question, therefore, presents itself, viz.: *has any improvement in its prophylatic or curative treatment been made?* In other words, are those physicians who have had the most favorable opportunities for observing its phenomena, and the relative value of the various remedial means adopted, prepared to shed even one new ray of light upon the intrinsic character or therapeutical indications of this desolating malady?

There is evidently great diversity of opinion in the profession respecting its true pathology, or else we must believe, that much of the treatment employed is altogether empirical. One physician attributes great success in his treatment of the severer varieties of the disease to the use of Nitrate of Silver, as a topical application to the throat; another finds the application of ice and iced-water most effectual. Another annoints his little patient from head to foot with fresh lard, or bacon; another paints the whole surface over with Tinct. of Iodine.

In the constitutional treatment of the different forms of the disease, quite as much contrariety of opinion obtains. Judging from the obituary records of the past six months, we have reason to infer that the results of the different varieties of treatment indicate no flattering progress in this field of practice.

From statistical results, founded upon experiment, what, may now be considered the most rational and approved treatment of Scarlatina? We look to *Boston* for a reply.

R.

Paracentesis Thoracis.—Dr. Bowditch has communicated to the *Boston Medical and Surgical Journal* another paper on this interesting operation. His first article appeared in April, 1852, in the *American Journal of Medical Sciences*; a second in January, 1854, in the *American Monthly*; the third, which has just appeared as above stated, closes as follows:

"If these statements are true—and I am as convinced of their

truth as I am of anything in my whole medical experience—I am justified in asserting, that a physician does wrong and acts foolishly who allows any patient to suffer months or years of misery, or even death itself, from pleuritic effusion, at any age—from any cause and with any complications—without at least *a trial of thorace tesis.* I write thus strongly because I fear that surgeons. of even the highest reputation, still shrink from performing this operation. This fear, I presume is owing to their considering it as similar to the operation laid down in all, or almost all, of their own manuals. From that operation they ought in most cases to shrink. That which is here advocated is of a totally different character. and is. so far as my experience goes, harmless."

One peculiarity of Dr. Bowditch's operation consists in the use of an exploring trocar. In his second article he thus describes it: "A strong exploring trocar and canula have, in all the cases I shall present, been introduced, usually between the ninth and eleventh ribs, and below the angle of the scapula. To this canula, by means of an air-tight apparatus, a strong suction pump has been attached, and the fluid has been drawn out, without the possibility of the introduction of air *while the aperture that has been left has been so minute that no blood has flowed, and it has been immediately closed* on the withdrawal of the instrument." Another peculiarity consists in its application to acute as well as chronic cases, whenever the pleural cavity is filled with fluid, not waiting for all other remedies to fail before resorting to the surgical mode of relief. There is no question in our own mind as to the correctness of this practice. When acute pleuritis has resulted in hydro-thorax, or empyema, the sthenic character of the disease has passed away, and were it not for the oppressed state of the respiratory functions, under appropriate treatment, the patient would generally experience a satisfactory convalescence. Thoracentesis affords relief from this oppression, without communicating to the system more of a shock, than would the operation of venesection. Made with an exploring trocar, it, or even the old operation *delicately* made, does not involve any risk from the admission of air. Indeed, the danger from this source, is, perhaps, greatly overrated. A distinguished physician of our acquaintance, ridicules the idea of such danger, and points, in support of his position, to the great number of pleural abscesses, which are evacuated through the lungs, admitting air and adding to the empyema, the complication of emphysema. We have his promise of an original paper on this highly interesting subject. In our own teachings we have advocated the early operation, and in cases of empyema have given preference to the old valvular incision. By it we obtain freer and more ready exit of pus, and

have never experienced any difficulty in preventing the entrance of air. The *practical* point, however, consists in the *early* resort to the operation. It is free from danger and efficient in relief. G

Glycerne Solution of Borax.—Dr. Geo. T. Elliot, jr., recommends (*N. Y. Journal*) "a solution of borax in glycerne, the former being in the proportion of one third," in the treatment of thrush and excoriated nipples. In the latter disease, he says, "it is advisable, however, to teach the child to nurse through an artificial nipple while cicatrization is taking place." He has also used it upon ulcerations of the os uteri. Glycerne appears to be a rising star.

Since writing the above, we have received Mr. Stearns' article on the subject of Glycerne. It is an excellent paper, and prepared by an educated and *practical* pharmaceutist.

New Apparatus for fractured clavicle.—Dr. Wheedon in the *Boston Medical and Surgical Journal* calls attention to an apparatus, which he thus describes:

"The apparatus consists of a short crutch, the shank of which is made of two pieces of steel, so as to slide up and down, and adapt its length to the heighth of the individual. At the top of the shank is attached a crescent-shaped piece of wood, to be padded in the form of a wedge; and at the lower part of the shank is a small foot-piece made to rest in the pocket of a broad leather belt, which is to be placed around the waist.

It is applied in the following manner. The belt is buckled around the waist, with its pocket between the auterior superior spinous process of the illium and the *symphysis pubis;* the foot-piece is then placed in the pocket of the belt, the wedge in the axilla, and the arm drawn over the wedge until the elbow touches the side, where it is confined by a roller or other means.

All the indications required in the treatment of this fracture are thus accomplished; the shoulder is carried upward by the length of the crutch, outward by the pad, and backward by the direction in which the upward force is exerted."

If we were to criticise this mode of dressing fractured clavicle, we should express a doubt of its security, because, as described, there is nothing to prevent the belt from slipping around the body, and thus failing in its support of the shoulder. As the result of our own experience, we have a decided preference for the neck yoke manufactured by Day. It affords perfect security, without irksome confinement.

G.

To Contributors.—We are anxious and determined to issue the *Independent* promptly on the first of each month. The only delay thus far experienced, has been in the receipt of matter for the original department. Contributors are therefore requested to send in their papers so that they will reach us by the tenth of the month preceding the issue in which they wish their articles to appear. This rule will ensure the prompt appearance of the *Independent.*

With the present issue, we send bills to all such as have not paid for the current volume. The Editors, being physicians and used to the fare, can *work* without being paid, but the printers have no desire to learn the lesson. Subscribers, therefore, will please send us the amount of the year's subscription, and oblige, not only us, but render justice to the followers of the immortal Franklin.

The August Number of the *Independent* will contain original papers from J. Adams Allen, m. d., H. C. Hitchcock, m. d., Edward Dorsch, m. d., and Frederick Stearns, Pharmacutist. Mr. Stearns' paper is upon a subject of great interest at the present time, viz. :—*Liquors and their Adulterations.*" The system (for it is really a *system*) of adulteration has been carried so far, and is practiced so generally, that the information contained in this paper will prove of great practical value.

News Items, from the London Correspondent of the Montreal Medical Chronicle.—"I have another death to record, but with feelings very different from those which prompted me to do so in Scoresby's case. It is the death, not of an individual, but of one of the instruments of a system which is fast on the wane, and will be shortly reckoned as one of the "strange things that were." *The London Homœpathic Hospital, devoted to this delusion in London, has closed its doors!* The *Lancet* says, while recording the melancholy event, that, "like all quackeries, it has had its day: like all quackeries, it has been supported by the shallow, weak and credulous on the one side, and the charlatan and the rogue on the other. Such alliances are invariably broken when either the eyes of the one are opened, or the capacity of the other is not gratified." Poor Lord Robert Grosvenor, the champion of Homœpathy, has confessed himself diddled, and declares he has been humbugged from first to last. He now employs a regular practitioner."

"The Iodide of Amonium—A chemical much used in photograpy has been introduced into Therapeutics, by my friend Dr. B. W. Richardson, the Editor of the *Quarterly Journal of Public Health.* It is quite soluable in water, not unpleasant to the taste, and a little more pungent than Iodide of Potassium. It is given in doses of from one to three grains for an adult. It possesses absolutely marvellous powers in dispelling strumous enlargements much more rapidly than its sister salt. It has been found of great value by Dr. Richardson in secondary syphilis chronic rheumatism, the primary stage of phthisis, and various forms of scrofula. It may be used, also, externally in the form of a linament with glycerine or soap linament as a menstruum. It is thus early absorbed. In this manner (a drachm to the ounce of glycerine) he treats enlarged tonsils in children, applying it by means of a camel hair brush every night.

From what I have seen and heard of this new salve from my friend, and with the experience I am already gaining of its value myself in public and private practice, I do not hesitate to prophesy the most valuble and important results from its use, and I loose no time in drawing your readers attention to it."

CORRESPONDENCE.

EIGHTH ANNUAL MEETING OF THE STATE MEDICAL SOCIETY OF INDIANA.

Editors of the Medical Independent:—Perhaps a few *random notes*, of the transactions of the State Medical Society of Indiana, at its May session, may not be wholly devoid of interest to the patrons and readers of the "Medical Independent." I have ventured to offer you the subjoined as a kind of medical "ollopod."

From the number of annual meetings held by our State Society, it will be seen, that it has been organized over eight years. But little interest was manifested by the profession at large in the State, in the prosperity of the State Medical Society until some three years since, when its constitution was so amended as to have its meetings held regularly at the Capitol of the State, since which time the meetings of the society have been growing in interest, and securing from year to year, a better attendance of the members of the profession throughout the State. The cause of this is doubtless from the fact, that more than sixty of the ninety-one counties in the State are accessible from and to the Capitol by railroad.

The membership of our State Society now numbers something over four hundred, some less than one-fourth of this number only at-

tended the May session of the present year. The number would have been larger, but for a misapprehension on the part of some of the members in different portions of the State, as to the time of meeting, against a recurrence of which a sure provision has been made.

The last annual meeting of the State Society was one of great unanimity and good feeling. Besides the reciprocal professional *sharpening* that all medical men in attendance upon such occasions receive, the cultivation of their social relations constitutes one of the most charming features of medical organization. Old friendships are renewed and strengthened, and new ones formed, the pleasures and enjoyments of which dwell greenly in the memories of the participants, as they severally tread the too often rugged pathway of professional duties.

The first report from special committees, was "on the effects and comparative value of active blood-letting in Pneumonia," and was of respectable merits,—brief and pointed,—eliciting some discussion, in which those who participated took opposite ground, showing most clearly in Pneumonia, as in almost all acute diseases, the modifying influences of climate, locality, and the diseases preceding its prevalence, have in forming its peculiar type. In some portions of the State where pneumonia prevailed more or less epidemically, its character was decidedly sthenic, absolutely demanding active depletion by the lancet in the early stages of the disease, or the use of some active and reliable arterial sedative, in order to procure a favorable issue in the treatment, while in other portions of the State, where the disease also prevailed as an epidemic, the treatment pursued, that was most successful was almost in all respects the opposite, namely, that which western practitioners sometimes term the "supporting plan of treatment," in the use of antiperiodics, alteratives, expectorants, anodynes, sedatives, and counter-irritants. The latter method was almost universally adopted in portions of the State where diseases are prevalent of a malarious origin. I think it would be safe to state that the opinion of a large majority of the members present, was in opposition to active blood-letting in pneumonia, based upon individual observation made in active practice during periods of from five to thirty years.

The next report was from a member of the committee "on Purgations in Dysentery" in which considerable ability was manifested. The author advocated the use of mild laxatives, rather than active purgatives, conjoined with mercurial altratives. In the discussion of this subject, as in the treatment of Pneumonia, the effects of climate and locality were again exhibited. In some localities, where dysentery prevailed as an epidemic, the treatment consisted in simply

"emulging the liver by the use of the mildest mercurial preparations, and depleting the mucous exhalations of the intestinal canal, by using minute and often repeated portions of Sulphate of Magnesia," while in other portions of the State, where this disease also prevailed as an epidemic, alterative mercurials combined with opiates, laxative portions of castor oil, astringents and anodynes, and not unfrequently antiperiodics and tonics were found to be necessary in treating successfully, this often formidable disease.

The committee "on the effects of blood letting in common Epilepsy, Convulsions, &c." reported through their chairman, Dr. Hutchison, that they had examined the literature of the subject, and find that none of the recent authorities have any confidence in blood letting as a remedy in Epilepsy, but on the contrary, an opposite mode of treatment. The disease being one of debility instead of plethora, the question was altogether a negative one, and unsuited to a report.

The committee "on the treatment of fractures and false joints," made an able and interesting report through their chairman, Dr. Meeker, of La Porte. The subject was treated with marked ability, illustrated with cases, evincing a knowledge of all the modern improvments and appliances now in use in this interesting branch of surgery. The committee was continued, with instructions to prosecute their researches upon this subject and report at the next meeting of the society.

The special committee "to memorialize our State Legislature, to pass a law for the protection of the citizens of the State against incompetency in Physicians, Surgeons and Apothecaries," made a very able report, expressing confidence in their ultimate success in procuring the desired legal enactment.

The committee "on Practice of Medicine" reported through their chairman, Dr. Cogly, of Madison. The report was very elaborate and of great length, but was heard by the members of the society with marked attention. The author did ample justice to so wide and varied a subject as that upon which the report was based.

The committee "to present a memorial on vital statistics to the State Legislature," reported that they had presented a memorial, and a bill had passed its second reading, embodying such a law as was asked for in the memorial, and that they were hopeful of its final passage at the next session of the legislature.

The committee "on Medical Education" made an able and comprehensive report, by their chairman, Dr. Fishback, of Shelbyville. The report embraced a thorough examination of the entire subject of medical education, pointing out the defects in the present system of education, and taking high ground in favor of decided reform in

teaching, both in our medical schools, and in our present mode of private pupilage. A strong effort will be made until successful, at the annual meetings of our society, to impress on all of its members, a practical sense of the obligations resting upon every member of the profession, and especially of the State Medical Society, to labor constantly and thoughtfully in behalf of the needed reforms in medical education, as well as in other respects, to make the society in the highest degree efficient for the attainment of the ends of its organization. This is unquestionably the only true method of advancing the honor and interest of the profession, and will be efficient, just in proportion to the number and efficiency of individual members, who devote themselves to the effort. Our efforts hitherto have failed to realize our hopes, because they have been spasmodic, rather than steady and persistant. It is a gratifying fact, that the past year has shown a much larger number of the profession in this State sympathizing in these views than at any former period. Persevering action is all we now need for the slow, but certain accomplishment of our objects.

Several amendments to the Constitution of the State Society were introduced at the last meeting, having a direct bearing upon the subject of medical education, but which will receive no definite action until next meeting. The friends and advocates of the proposed amendments have strong hopes of their final adoption. Among other provisions contained in the proposed amendments, is to elect a board of censors for the examination of all candidates for full admission into the profession in this State, and to membership in the State Society. The board of censors are required to meet as often as the society shall determine, in different portions of the State. The examination to consist of the ordinary oral examination in the various branches of medical science, the presentation of a written *thesis* on some medical subject, the detailed report of at least one case of disease, giving its pathology and treatment, and if practicable, the applicant must examine and prescribe for at least one patient in presence of the board. The examination and requirements are to be the same, whether the applicant possesses a diploma conferred by a medical college or not. The proposed amendments also require, that the applicant for membership in the State Society, shall not only pass an examination before the board of censors, but must hold membership in some local society, and the local society in which he holds membership must be auxiliary to the State Society, having a provision in its constitution for a board of censors, a part of whose duty shall be to examine all applicants for admission into the office of any of the local society's members as students of medicine. The local society shall also have a provision in its constitution, making it a penal offence for any of

its members to receive any one as a student not having a certificate of qualifications from the board of censors.

The standard of qualifications in the examination of students, is that recommended by the American Medical Convention of 1847.

Should our efforts to amend the constitution of our society, as proposed in the foregoing, be crowned with success, we will have gained —first, a close alliance between the local societies and the State Society, and also between the State Society and the American Medical Association,—as the proposed amendments to the constitution of our State Society, make it auxiliary to that institution. It is to be hoped that in time, all the State Medical Societies will perfect this auxiliary plan of organization, by which a closer union will be effected between the local and State societies, as well as the State societies with the National, so that opinions held and sentiments expressed by the most remote local society, will be heard and felt at the great head of the Medical Organization of the United States, and *vice versa*.

Second,—Reputable physicians will be compelled to organize themselves into local societies, and that colossal source from whence nearly all unworthy members are furnished to the profession, will be cut off, namely, the receiving of young men, by practitioners of medicine, into their offices as students of medicine, whose primary education and mental training have been anything but such as fit them to prosecute the study and practice intelligently, a science and art as intricate as that of medicine.

A committee was appointed to prepare and present to the society at its next meeting, a plan for an interchange of published transactions of local societies within the United States. Should some arrangement be perfected to bring about so desirable an object, it could not fail to do much good. A mass of medical intelligence would be made available to every member of the medical profession that now too often finds but a limited circle of readers.

The committee "on Veratrum Viride" made a full and elaborate report, by their chairman, Dr. Jameson, of Indianapolis, setting forth its entire reliability as an arterial sedative, based upon the experience of a large number of the profession in different parts of the State. The properties of this agent were discussed at length by the members of the society. All who had used it spoke of it in terms of decided approbation, as an agent to control arterial action. Some claimed for it, alterative and expectorant properties. None condemned it who had used it, all agreed that it seldom failed to produce the desired results.

The committee "on Diseases of the Eye and Ear," reported through their chairman, Dr. Parxin, of Indianapolis. The report was one of

much merit. The want of correct knowledge by the profession generally of the diseases peculiar to those organs, and the often irrational mode of treating them, by reputable members of the profession, was pointed out, and the cause of this deficiency of correct practical information on diseases of the eye and ear was traced to its *proper source*, namely, the paucity of instruction given in our medical schools, to their graduates, upon the anatomy, physiology, and pathology of the eye and ear, and that the whole group of diseases peculiar to those complex organs. were usually disposed of in one or two lectures, in our medical colleges, if they are referred to at all. The reason why—the lecture terms are too short, and consequently *no time* to dwell longer upon that class of diseases, which too often fall into the hands of specialist *imposters*. Is not the time near at hand when our medical institutions will be driven by the public sentiment of the profession to a prolongation of their lecture terms, and an increase of professorships, as well as increased facilities for clinical instruction in *all* diseases.

A preamble and series of resolutions were adopted by the society, upon the death of the distinguished and universally lamented Dr. Kane.

The eighth annual meeting of the society closed on the evening of the third day of its session, by an able and appropriate address from the President, Dr. Meeker. The members in attendance left for their respective fields of professional labor, feeling renewed in the spirit of the profession, and the most sceptical were forced to acknowledge that the medical world "does move."

In this necessarily imperfect synopsis of the transactions of our State Society, many reports and papers of value, as contributions to our noble profession have been passed over without notice, not from any disposition on the part of the writer of this desultory article, to make unjust discriminations, or invidious distinctions, but for want of the facilities to do their authors simple justice, as none of the reports or papers of the society were in his possession. Thirty delegates were elected to the American Medical Association.

South Bend, Ind., June, 1857. H.

Editors of the Medical Independent:—Permit me to draw your attention in a friendly manner, to the case of fracture of the cranium reported in the May number of your journal.

Your correspondent in his concluding paragraph, remarks: "This case is interesting so far as it illustrates the recuperative powers of

nature, aided by a good constitution in the young." So far, so good; for it appears that the symptoms of compression were not very promptly relieved by the operation, since it required the aid of tolerably free stimulation for three days to bring the functions of organic as well as of animal life up to their normal standard of action, and to make manifest their freedom from oppression. Nevertheless, the recuperative powers were the more worthy of credit, from the circumstance that in addition to the shock they sustained by the injury, they were still further crippled by a protraction of anæsthesia during two hours and a half, to say nothing of the operation.

As to the surgical merits of the operation itself, I have nothing to say, but while it is doubtless a proper source of gratulation that the patient survived the combined influences above referred to, the question must have occurred to many of your readers, as to whether the use of chloroform is indicated in cases of "compression" generally; and more particularly in such a case as the one now under consideration, where the shock of "concussion" in an aggravated degree was superadded upon the usual result of "compression."

Possibly a certain vagueness of expression in a preceding paragraph, may have originated in my mind a misconception of the nature of the case, and of the indications it afforded. I refer to a sentence worded as follows:

"Aug. 30, 7 A.M. * * * * and the patient extremely *sensitive* to the *slightest* touch of the wound though STILL *unconscious.*"

It is difficult to conceive how a patient suffering from compression should retain such acute sensibility, and yet remain unconscious; indeed the terms imply a self contradiction, if the word unconscious as here used is to be understood as synonomous with the term "insensible," as expressive of the condition in which the patient was found and described in the first paragraph of your correspondent's communication; a construction the more legitimate, as we find the adjective unconscious immediately preceded by the adverb "still."

I trust your correspondent will receive these brief suggestions in the same spirit which prompts them, namely, a sincere wish that the cause of science may be advanced by an interchange and comparison of thoughts.

A. G. MERRETT, M.D.,
New York.

Surgical practice in cases of cranial fracture with depression, has, within a few years, undergone a marked change; formerly the rule to elevate the depressed portion of bone, universally obtained; at present surgeons are guided in reference to this question, by symptoms

of *compression*. If there is compression of the brain, the operation is imperatively demanded; if not, the surgeon should content himself with merely removing, with the forceps, whatever loose pieces of bone there may be in the wound, for experience has shown that very considerable portions of the cranial walls may be depressed without *compressing* the brain, and as the operation has for its object, the relief of compression, it is contra-indicated, when symptoms of that condition are absent. One of the most prominent symptoms of compression would be such a perfect loss of sensation as to render the patient entirely insensible to impressions attempted upon *any of the senses*. Such a patient would be insensible to any injury inflicted, consequently no anæsthetic would be required. *Anæsthsia would be a result of the compression*, and would cease when compression was relieved. In the case referred to, there were symptoms of *concussion*, not of *compression*. According to modern surgery, the operation was contra-indicated, though the influence of old ideas is yet seen in *some* modern works on surgery. G.

A Chapter from Æsox.—*Thesis De Omnibus Rebus Et Quibusdam Aliis.*—In the treatment of Hydrocele I have found nothing so effectual as carrying one or two loose linen threads through the sack, and then tying the ends together and allowing them to remain until the requisite amount of inflamation is created.

My own experience is, that the fluid ought not to be evacuated prior to the introduction of the thread. It will drain off mainly into the loose areola tissue and thence be absorbed. Not more than one thread should be used in each puncture, and it is generally better not to have more than one thread and a single puncture. The seton of several threads together fails much too often to be relied upon.

Some seven or eight years ago, I had a case the result of which was so entirely unexpected to myself and every one else, that I have scarcely dared to mention it for fear it would be received as a Munchausenism. A child between two and three years old was run over by one wheel of a loaded gravel car, containing one yard and a third cubic measure of gravel. It was one of the ordinary heavy trucks drawn by horses, upon a temporary flat bar railroad. Being sent for instantly, I accoutred myself with the supposed necessary instruments for amputation, and departed in high haste. On my arrival, I found the evidence *unequivocal* that the wheel had passed over one leg, striking it obliquely just above the internal malleolus and leaving it about the lower part of the upper third. The mark of the flange of

the wheel was left, by very slight abrasion of the cuticle and by a band of black and blue—but the bone was uninjured and the trouble was so trifling that in three days time, the little Emerald Islander was running about as well as ever. The weight sustained could not have been less than a ton or a ton and a quarter. Wouldn't it have smashed a yankee leg?

In a case of old fracture of one of the lower vertebræ of two years standing accompanied with caries and a large ulceration, complete paraplegia, &c., an M. D. proposed, the patient consenting, to cut out a portion of the diseased vertebra and thus remove the pressure from the spinal cord.

If successful, wont it be a good case to report in the same collection with the Cincinnati Surgeon's case—the one you recollect, Messrs. Editors, where the Doctor removed the entire liver without the production of any considerable inconvenience.

Much has been said about *Euthanasia*, and some have even proposed the administration of chloroform to facilitate "shuffling off this mortal coil. Considering the unequalled ease with which medical societies "wrap the drapery of their couches about them and lie down to pleasant dreams," what do you say to enrolling diseases under a Constitution and By-Laws?

Wouldn't patients get along with the "debt of nature" with as much *sang froid* as they do with the "fee bill?"

What is the function of the cerebellum?

I have just dismissed a case (*i.e.*, she died,) of tumor within the left lobe of the cerebellum, about an inch and a fourth in diameter, under the microscope seen to be tuberculous.

The earlier and indeed constant symptoms were those of cephalalgia, often distinctly periodical and controllable to a limited extent by ordinary antiperiodics. *The catamenia appeared regularly.* The mind remained generally clear to the last. Partial paralysis of the right arm and partial ptosis of both superior eyelids with strabismus late in the disease. Aside from these, there were no particular nervous phenomena, except persistent vomiting.

In the progress of the case the lungs became gradually and largely infiltrated with tubercle. For a considerable time previous, (nearly a year) she had been occasionally, forgetful and had experienced difficulty in "collecting her thoughts."

About eight weeks ago, a stout athletic young man was caught by the right arm between two cog wheels in a flouring mill. The wheels are about two feet in diameter, four inches wide, and the cogs about five-eighths of an inch deep and with like indentations. The play of

the wheels is not more than one fourth or, at the most, three eighths of an inch. The arm just above the elbow passed through this space. A single cog was broken out and the arm may have been caught at that point—supposing this to be the case, there was in one spot a space of the depth and thickness of a single cog for the arm to rest in, and the balance had to be compressed to the thickness of one fourth of an inch.

Emphatically, the young man (or rather, his arm) was in "a tight place." I saw him soon after. There was considerable systemic shock, and he had bled freely. There was, of course, a compound comminuted fracture. My fingers introduced at a large openiug behind, passed freely around the interior of the arm, when what was not vacancy was mainly pumice. Fortunately the artery was uninjured, and sensation and motion of the fore-arm and fingers were quite perfect. On consultation, determined to try and save the arm. The displacement seemed wholly to be produced by the deltoid. Rectified this as nearly as possible by position—carrying the arm outwards and upwards. The tissues were so woefully "chewed up" that otherwise we were content to wet it with cooling lotions, and, with plentiful doses of morphine, let him alone.

Two weeks after, I removed some small fragments of bone and cut off a long spiculum that projected from the end of the upper fragment. The subsequent treatment was beef-steak &c. Pasteboard and shingles variously cut and carved to suit the exigencies of the various outlets of discharge, which has been free but not profuse.

May 26th, called upon him as he was about starting for his home nine miles south of Ypsilanti. Bone evidently pretty firmly consolidated—motion in the elbow joint. The external wounds about healed up, and every indication that a perfect cure will result. (Bye the bye, much to my astonishment he paid his bill before he left.)

Per Contra.—A few years ago a fine athletic young man suffered a severe compound fracture of the leg by means of the M. C. R. R. cars. The soft tissues were torn off in front and to the inner side of the tibia about eight inches in length by four in width. Some four inches of the tibia was bodily knocked out. The artery could be felt beating freely in the interosseous space—sensation and motion in the foot and toes. The fibula was uninjured and not displaced. Ambitious of a display of "conservative surgery" (especially as the patient would not let us take the leg off) and with the approbation of distinguished counsel—I made an effort to save the leg and the life. The case ran on apparently very favorably for about a fortnight when symptoms of mortification, much to *my* mortification) appeared. Counsel and self both recommended amputation, which was accordingly beautifully and expedi-

tiously performed by Prof. Gunn of the University, the patient being gloriously under the influence of chloroform. There seemed no remarkable shock, but the poor fellow gradually sunk and died in about eight hoars after.

I may remark that tho "line of demarcation" was well defined and the patient's strength apparently fully equal to the operation. Now let me appeal to the theory of my dear and *talented* friend of the Peninsular, whether this difference in result of my two cases was because one was "preceded by a railroad accident" and the other by a pair of cog wheels in a mill? I pause for a reply.

Looking at the two injuries, I had rather have taken the risks on the leg, for the exsection was about as neatly done and the tissues did not look much worse than after certain hospital operations I wot of—whereas the cog-wheels beat even the digging for enchondroma we have read about in the valuable periodical above alluded to.

I am happy to furnish this additional case to the list of my friend in establishing that new principle in surgery. The railroad cars are still ahead of cog-wheels and threshing machines.

Speaking of the payment above alluded to, reminds that real estate has gone up, provisions have gone up, horses and chaises have gone up, and things generally have "riz," like well leavened bread, but doctor's bills "go up" quite diversely. I was scant for office room, and considering the most expedient course for remedying the difficulty without a move and going up of rent, I hit upon a plan that I would recommend to my professional brethren. An immense pile of "bills receivable" (This is a "paradox"), and their correlative—"bills payable"—(a "dog *me*") attracted my attention. Light burst upon me. A blessing rest upon locofocos! (*matches* I mean.) In their exit from my sight, transformed into gas and vapor with the accumulated Dr.'s (not *doctors* but *debits*) of years—they gave light. Rejoice with me, I am relieved—my office is now large enough—I have room for even waste paper which may be used.

Try it—*Expertus loquor.* Let your future bills be really *honoraria*. *Dum redeant Saturnia regna.*

Apropos of horses and chaises—are chaises professional? Or parti-colored horses? Are they not contrary to the code of ethics? Are they not unseemly and savoring of quackdom? Do they not portend a hankering after notoriety and in fact are they not advertising devices?

An ancient whilome friend of mine hath sounded the alarm in my ears, and I have laid it to heart. Do answer me this INDEPENDENTLY.

I will no chaises—*Procul O procul O chaises*! The only legitimate vehicle for a physician is one having three wheels only—for then it is

expressive in its very construction of the tripod of old time—the three Graces, the square root of the Muses—the three Fates, the heads of Cerberus—the trident of Neptune, the forks of Jove's thunderbolt—the three Furies. The Aristotelian number—containing within itself a beginning, a middle, and an end.

> TERNA *tibi haec primum* TRIPLICI *diversa colore*
> *Licia circumdo*, TERQUE *haec altaria circum*
> *Effigiem duco.* *Virgil, eclogus viij.*

"Thrice is he armed (and *wheeled*) that hath his quarrel just!"
What is Janus beside one having *three* faces?
This is a Not-ty subject and grows upon me, but I forbear.

Ever Yours, Æsox.

[We cordially welcome our able and pleasing contributor, notwithstanding his sly allusion to the color of our pet horse. Long may Æsox flourish, instruct and entertain. G.]

NORTH EAST DISTRICT MEDICAL AND SCIENTIFIC ASSOCIATION.

Pursuant to adjournment, a meeting of this Association was held at the Huron House, Port Huron, Wednesday, June, 1857, Dr. Stockwell in the chair, and Dr. Knight, Secretary.

The Association was called to order by the President, and the proceedings of the previous meeting were read and approved.

On motion, a committee of three were appointed to report names of new members.

Drs. Andrews, Kibbe and Reed were appointed such committee.

The committee reported the names of Drs. Travers, Tucker and Wilson of Port Huron, and G. W. Cornell of St. Clair, all of whom were received as members.

On motion of Dr. Brownell, it was voted that the Secretary be directed to correspond with the standing committees and ascertain whether they have prepared reports upon the subjects assigned them or not, and report at the next meeting.

Dr. Knight, a committee appointed to report upon Surgical Practice made a report upon the same, which was accepted and adopted.

Dr. Andrews, a committeee to report upon meterological observa-

tions, made a very interesting report upon the same, which was accepted and adopted.

Dr. Andrews read from an ancient pamphlet, published by Mr. Moses Willard, of Albany, N. Y., an interesting account of remitting fever as it occurred epidemically in that city in 1809.

On motion, the matter of Dr. Buffum was laid on the table until the next meeting.

Drs. Stockwell, Andrews, Travers, Brownell, Cornell and Knight made reports upon some interesting features of diseases which have appeared in their several localities during the year.

Dr. Knight offered the following resolution:

Resolved—That when we adjourn, we adjourn to meet at Utica on the last Wednesday of January next. Adopted.

On motion of Dr. Wilson:

Resolved—That a committee be appointed to prepare a system of meterological observation and record of disease throughout the district, in such manner that as far as possible, a knowledge of the influence of meterological phenomena upon health may be developed. Adopted.

Drs. Andrews, Stockwell, Wilson and Knight were appointed said committee.

On motion, the Association proceeded to elect Delegates to attend the State Annual Association, to be heid in Detroit in January next. The following persons were elected:

Drs. Cornell and Travers of St. Clair county.
" Knight and Chapman of Macomb "
" Smith and Wilson, of Oakland.
" Stone and Kinney of Lapeer.

On motion, it was

Resolved—That we tender our sincere thanks to our host, Mr. Davison, of the Huron House, for the liberal hospitality we have this day received at his hands.

On motion, the Association adjourned to meet at Utica, on the last Wednesday of January next.

Dr. C. M. STOCKWELL, President.

Dr. P. A. KNIGHT, Secretary.

From the Nashville Journal of Medicine.

AMERICAN MEDICAL ASSOCIATION.

TENTH ANNUAL SESSION.

[CONCLUDED.]

NASHVILLE, May 7, 1857.

Functions of Different Portions of the Cerebellum.—E. Andrews; of Illinois.

Causes of the Impulse of the Heart and the Agencies which Influence it in Health and Disease.—*J.* W. Corson, of New York City.

Treatment of the Results of Obstructed Labor.—J. Marion Sims, of New York.

Treatment best adapted to each variety of cataract, with the method of operation, place of election, time, age, etc.—Mark Stephenson, of New York.

Human, Animal and Vegetable Parasites.—Joseph Leidy, of Philadelphia.

Best Substitutes for Cinchona and its Preparation in the Treatment of Intermittent Fever, etc.—B. S. Woodward, of Indiana.

Intimate Structure and Pathology of the Kidney.—Charles E. Isaacs, of New York.

Etiology and Pathology of Epidemic Cholera.—T. W. Gordon, of Ohio.

Inflammation of the Cervix Uteri.—Henry H. Miller, of Louisville, Kentucky.

On Milk Sickness.—W. H. Byford, of Indiana.

Best means of causing an increase of the number of Essays.—Drs. Leidy, Woods, and Meigs, of Pennsylvania.

Changes produced in Composition and Properties of Milk.—N. S. Davis, of Illinois.

Stomatitis Materna.—D. C. McGugin, of Iowa.

On Criminal Abortion, with a view to its generation suppression.—H. N. Storer, of Boston.

The committee recommend that the committees ordered by the adoption of the resolutions accompanying Dr. A. J. Semmes' report, be filled by the several State Societies.

On motion of Dr. Brodie. amended so as to refer the same to the officers of several State Societies. Carried.

The committee also recommend the amendment of the third article of the constitution, in relation to meetings, by inserting after the words "first Tuesday in May," the words, *or the first Tuesday in June,*

and also by inserting after the words "shall be determined," the words *with the time of meeting.*

Special Committee on the present state of science, as regards the Pathology and Therapeutics of the Reproductive Organs of the Female.—D. Fordyce Barker, of New York.

On Moral Insanity.—D. M. Reese, of New York.

On Calculi and the Diseases of the Urinary Organs, in Iowa, Minnesota, and Nebraska.—Dr. J. C. Hughes, of Keokuk, Iowa.

On the nature, tendency and general treatment of Syphilitic Bubo.—Moses Gunn, of Detroit, Michigan.

Organic Chemistry—its progress and relations to Physiology and Pathology.—Prof. Samuel St. John, of New York.

On Medical Education.—By (Dr. Currey's resolution,) James R. Wood, of New York; Geo. R. Grant, of Memphis, Tennessee; John Watson, of Few York; C. B. Nottingham, of Macon, Georgia; R. La Roche, of Philadelphia, Pennsylvania.

To fill a vacancy in the Committee on Medical Topography and Epidemics.—Dr. J. L. Cabell, of Charlottesville, Va.

Dr. March moved that the Report of the Nominating Committee be taken up, and each subject to which it refers, be considered separately, which motion prevailed. That portion relating to nominations was then adopted.

The place of the next annual meeting of the Association being the next subject in order, after some discussion, on motion of Dr. March, the report of the committee was adopted.

Dr. Lindsley moved that, as Dr. Semmes, one of the newly elected Secretaries was absent, Dr. Brodie, of Michigan, be elected Secretary *pro tem* which was carried.

Dr. Pitcher offered the following resolution, which was unanimously adopted:

Resolved, That a committee of three be appointed, of which the President of the Association shall be chairman, to communicate with the Surgeon General of the Army, the chief of the Medical Bureau of the Navy, and the Secretary of the Treasury of the United States, with a view to secure the concurrence of these departments of the Federal Government, so that its contributions to the Medical Topography, the Vital Statistics, and the Sanitary Police of the nation may be made tributary to the labors of this Association.

The Chair appointed as such committee, Drs. Z. Pitcher, of Michigan, and R. H. Coolidge, of Kansas.

Dr. Bowling, Chairman of the Committee on Prize Essays, submitted the report of said committee, as follows:

The Committee on Prize Essays report that four essays have been received, each possessing great merit.

The Committee selected the following two essays for the two prizes, provided for at the last meeting of this Association.

1st. One entitled "The Excreto-Secretory System of Nerves. Its relation to Physiology and Pathology," with the following motto:

"*Observation becomes Experiment. when used in severe processes of Induction*," and signed Henry Frazer Campbell, Georgia.

2d. "Experimental researches relative to the Nutrition, Value and Physiological Effects of Albumen, Starch and Gum when singly and exclusively used as Food," with the following motto:

"*Qum sequimur? quove in jubes? ubi ponere sedis?*

Da pater augurium, atque animis illabere nostris!" and signed, Wm. A. Hammond, M.D., Asst. Surgeon, U. S. Army.

The President read an invitation to the members of the Association, to visit the University of Nashville, in its Military, Literary, and Medical Departments.

The Committee on Voluntary Contributions, reported in favor of the publication in the Transactions of the Association, of the following paper. "On the blending and conversion of Types in Fever." By C. S. Pease, M. D., of Wisconsin. The report was adopted.

Dr. McMurray offerred the following resolution which was adopted:

Resolved, By this Association, that the Committee on Publications be instructed to append the Code of Ethics of the American Medical Association to each volume of its present and future Annual Transactions.

The amendments to the Constitution proposed by Dr. Stocker, of Pennsylvania, at the last Annual Session, were taken up and laid on the table.

Dr. Lindsley offered the following amendment to the Constitution, which was seconded by Dr. Gunn:

"In Art. II, omit the words 'Medical Colleges,' and also the words 'The Faculty of every regular constituted Medical College, or chartered School of Medicine, shall have the privilege of sending two delegates.'"

The amendment lies over until the next meeting of the Association under a rule of the organization.

On motion of Dr. Palmer, the resolutions reported at the last Annual meeting of the Association, by the Committees on Plans of Or-

ganization for State and County Medical Societies, were taken up and adopted.

The following resolutions were offered and adopted:

By Dr. Pitcher—

Resolved, That the members of this Association, as recipients of the cordial, generous, and elegant hospitalities extended to them by the profession and the citizens of Nashville, in placing on record an expression of thanks for the social amenities they have enjoyed during its tenth annual session, wish also to leave behind them the assurance, that the recollection of their short sojourn in Tennessee, will be cherished as dearly as the remembrance of the far off sound of water, by the exhausted and way-worn traveler.

By Dr. Means—

Resolved, That the earnest thanks of this body be presented to the authorities of the State and City, who have tendered this magnificent State Capitol for their sittings during the present session.

By Dr. Currey—

Resolved, That the thanks of the Association be tendered to the Reporters of the City Press, for the accuracy and promptness with which they have reported the proceedings of the Association, and to the Publishers, for the liberal supply of their morning papers during the Sessions of the Association.

By Dr. Wister—

Resolved, That the thanks of this meeting be presented to Dr. Wm. Brodie, for the efficiency with which he has discharged his duty as Secretary.

By Dr. Byford—

Resolved, That the State and County Societies throughout the Union be requested to recommend their members to purchase the Transactions of the American Medical Association, and that their officers act as agents for the same.

On motion of Dr. Gunn, of Michigan, the Association recognized the presentation of a pamphlet by Henry Frazer Campbell, M.D., claiming "Priority in the Discovery and naming of the Excito-Secretory System of Nerves."

On motion of Dr. Byford, the Association then adjourned *sine die*.

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MEDICAL INDEPENDENT:
A MONTHLY
Review of Medicine and Surgery.

VOL. 3. DETROIT, AUGUST, 1857. NO 6.

Original Communications.

ARTICLE I. *Case of Hernia Complicated with Hydrocele and Hæmatocele—Operation followed by complete cure of all.* By H. O. HITCHCOCK, M. D., Late House Physician to Bellevue Hospital.

In the afternoon of April 19th, I was called to see A—— B——, and he gave the following account of himself:

Age, 28,—always robust and healthy—a carpenter by trade. Four years ago, while shingling a house, he noticed a rather sudden increase in his left testicle. It was painless, and gave him no discomfort, except from its size. He did not carry up the shingles, and does not remember to have strained himself in any way. No venereal disease had preceded or followed it.

In one week after its commencement, the tumor was as large, and much the same shape, as a goose-egg; and such have been its general size and shape up to the 18th of April —a little larger at autumn, and smaller in the spring,—his labor, during the summer and fall, being upon buildings, and in winter, in the shop.

The tumor was larger at its upper end than at its lower.—There was then, and has since been, a fullness at the external abdominal ring, but not, as he thinks, along the course of the inguinal canal. He could, at any time, increase the size of

the tumor by straining, as at stool, or by coughing. The *feel* of the tumor was, he says, as if there were water within.—Sometimes it would "loosen up," and then become hard and solid again.

While running a race, on the evening of April 18th, he felt a sudden "giving away" in his scrotum, as if the former solid tumor had broken.

There was no pain and no immediate enlargement of the tumor.

He walked to his boarding house, and went to bed.—The tumor soon began to enlarge, and continued so to do quite rapidly all night. Early in the morning, he went to the privy and had a very small movement from his bowels. While at stool, he noticed that the tumor was very considerably enlarged, particularly at its upper part, and he then noticed a decided fullness along the course of the inguinal canal.

When called to him, in the afternoon of the 19th, I found him lying on his bed with a tumor between his legs of more than 14 inches in length and 6 to 8 inches in diameter. The penis was completely concealed. The left side of the scrotum only seemed involved. There was much ecchymosis, especially at the lower and posterior part of the tumor. There was uniformity neither in the surface, the feel or the percussion. Attention was called to two large, roundish prominences, one at the lower posterior part, left side, the other at the lower anterior part, near the middle of the tumor. These seemed quite hard and inelastic. Over some parts, the *feel* was doughy—over others, as if there were a solid body within, and over others still, as if air were beneath.

Percussion, in some parts, gave complete dullness—in others, dullness less marked, while at the upper part of the tumor, there was decided resonance.

The tumor seemed to grow, by a pedicle, out from the external abdominal ring; and this pedicle was distinctly traceable, by the eye and the touch, along the whole course of the inguinal canal

The patient gave no evidence of constitutional disturbance

—skin moist and cool, pulse 70 and full, tongue clean, no nausea, no pain at either abdominal ring nor in the tumor itself. Ordered, a cathartic of Sulphate of Magnesia.

April 20th. At my request, Dr. J. Adams Allen visited the patient with me this morning. Patient has slept quietly —bowels unmoved. Dr. Allen's diagnosis agreed with my own—oblique inguinal hernia, with a large effusion of serum. Ordered, a cathartic of castor oil. Taxis was commenced by pressure from below, and a kind of *milking* process above.—We could distinctly feel something pass under our hands, with now and then a gurgle; and the patient could feel something "running into his belly," as he expressed it. By three hours' work, the tumor was reduced in size just about one-third. The reduction was much the most rapid at the commencement of taxis; afterwards, something seemed to impede it, and finally completely to stop it, as if there was a clog at one of the rings, or in the course of the canal. Taxis was resumed in the afternoon and evening, with a similar, but not so marked a reduction of the tumor.

Bowels still unmoved; pulse a little quickened; no pain; but little soreness from pressure at the external ring.

April 21st. Patient is much as we left him last night—bowels yet unmoved, though there has been considerable rumbling in them; pulse 80, full; skin moist; soreness less.

Taxis again resumed by Drs. Allen, Pratt and myself—sensations, to both physicians and patient, same as yesterday, followed by considerable reduction in the size of the tumor.

Again failing to completely reduce the hernia, we had recourse to the warm bath and tobacco poultice; but still there seemed to be a considerable part of the hernia unreduced.

April 22d. Drs. Allen, Pratt, William and Charles Motrom, with myself, found the patient, having had but little sleep, with a pulse 90, and rather quick and small; tongue coated; bowels still unmoved; not much pain, but much soreness at the external ring and along the canal. The tumor is now considerably larger than the double fists of a large man — of much the same shape as at first, with a very

marked fullness at the external ring and along the inguinal canal.

The injection of tobacco infusion was decided upon, and when complete relaxation was produced, taxis was again employed. The same sensations as at first were felt by surgeon and patient, and the tumor was sensibly reduced, but not altogether—nor was the fullness along the canal *at all* decreased.

It was agreed, by all the gentlemen present, that an operation was indispensible, and, at 2 o'clock P. M., the patient was put under chloroform and the operation performed.

Some of the tissues were much thickened, as if they had been the covering of an old hernia. On arriving at what we all thought *ought* to be the *sack of the hernia*, we were completely surprised to be unable to feel, through its walls, *any* contents other than fluids.

The layers overlying this sack were completely dissected from it, and we surrounded it. We found the cord behind it, but no intestine within.

It was suggested that this was the intestine itself—it extended along the direction of the canal, just where the intestine *should* be,—but where was the sack? That we had not cut it through we were very sure—and if we *had*, and this *was* the intestine, there was such complete adhesion all around that reduction was impossible. At this juncture, one of the gentlemen present boldly advised that a "peek-hole" be made into the thing before us. However, our incision was extended a little higher, and the parts dissected away, when lo! the suspicious-looking sack came abruptly to a cœcal end above, nearly on a level with the internal ring. Bands of fibres ran across it and along its middle, making its appearance much like the cœcal extremity of the colon. An incision into this sack showed it to be the upper extremity of the tunica vaginalis, filled with blood—some fluid, and much of it in dark, hard clots. About four ounces of blood were evacuated, and the whole upper part of the sack cut off.

The hernia was found to have been completely reduced by taxis, probably after the tobacco injection.

The wonnd was now closed and dressed. The patient, with 10 grs. of Dover's powder, slept well through the night.

April 23d. Patient, in all respects, doing well—pulse 90 and full; skin moist and cool; no more coating on tongue than yesterday; no pain.

April 24th. Pulse quickened—100, and rather hard; tongue more coated; bowels still unmoved; and patient has a feeling of general uneasiness. Ordered Ol. Ricini oz. iss., to be followed, in 3 hours, by a large enema—three pints—of warm soap-suds.

April 25th. Patient much better this morning—the oil and the enema were followed by two or three copious evacuations—pulse 70, full; tongue begins to clean off and appetite to return. Wound dressed this morning—nearly one-half has healed by first intention; but very little suppuration; no sign of sloughing.

The tumor, now about the size of a man's double fists, shows the same prominences as before described.

May 1st. Patient has gone on without one single untoward symptom.

The prominences before mentioned were opened to-day, by incisions of about an inch in length. The one nearer to the left side of the tumor, and on its posterior aspect, was found to be a true hæmatocele, the upper part of the sack of which, probably, we had cut off in our operation. The prominence near the middle of the tumor, and on its anterior aspect, was found to be a true hydrocele, and unconnected with the hæmatocele. It contained just about one ounce of clear serum. Strips of lint were passed into these openings and retained there.

May 15th. Patient is nearly well—wound completely healed. Suppuration has taken place in the cavities of the hydrocele and hæmatocele, and the sacks seem completely obliterated. Tumor is now not so large as a man's single fist.

May 28th. Have to-day fitted one of Marsh's trusses to

the patient, and he goes about his work, with an injunction to be very careful. Tumor is now no larger than a common fowl's egg, and this enlargement seems to be mostly in the testicle itself, which is twice or thrice its normal size. The thickening and induration of the walls of the left scrotum almost entirely gone. For the last three weeks, the tumor has been painted with Iodine.

Remarks.—This case presents us with several points of interest, in its history, its treatment and its result.

It seemed to us, that the young man had had, for the last three years, a hydrocele complicated with hernia.

It is probable, also, that there were two sacks of hydrocele —for after one, and the main one, had become an hæmatocele, there was still a true hydrocele found.

This old hernia must have been an "encysted" hernia, as Sir Astley Cooper has named it—*i. e.* the upper part of the tunica vaginalis was divided across by a septum, and in front was the hydrocele, and behind this septum was the hernia.

In our operation, we did not come into the canal so that the finger could be pressed upward, it being prevented by the septum.

By the accident, not only was the hydrocele converted into an hæmatocele, but the hernia received a very large increase. This, however, was entirely reduced by taxis, but at the very last. The sack of the hæmatocele extended so far up along the inguinal canal, that it completely misled us.

How could we have been sure that *all* the intestine and the omentum had been reduced?

The result in this case has been most happy and complete. For three years, the young man had been unable to cross his legs in sitting—now it is as easy for him to do so as for any one; and the size of the tumor is not more than twice the natural size of the scrotum and testicles. There seems to be no inclination for the hernia to descend.

Kalamazoo, June 22d, 1857.

ARTICLE II. *Liquors and their Adulterations.* By FREDERICK STEARNS, Pharmaceutist.

Modern researches, in that department of chemical science which treats of organic matter, have enabled the chemist to isolate from fermented grape juice those peculiar principles which give it aroma, bouquet, color, etc., and which serve to distinguish it from other liquids. They have also enabled him to procure, from the refuse of wine vats and by artificial means, the materials necessary for the successful imitation of every wine and distilled liquor known.

Formerly, *pure* liquors were *mixed*—that is, they were increased in bulk by additions of distilled spirit, and then brought up to the required standard by means of foreign substances. Now, however, they are *manufactured* entirely. The art of the "*mixer*" has become scientific by the aid of the chemist, and he is a *producer*. Now, the "jobber," who is skilled in all the mysteries of the trade, can stand beside a cask of pure spirit (highwine), and imitate perfectly, with chemical flavors, essential oils, etc., Otard or Schnapps, Johannisberg or St. Peray.

In our own country is this art of *manufacturing* liquors carried to its greatest perfection—and it is the purpose of the writer to show, in this article, some of the methods employed.

The high ruling prices of imported wines and liquors, caused by the scant vintages of late years, has been the great incentive to the artificial production of them here. It is even asserted that foreign liquor-makers, not satisfied with sophisticating their own growths and distillations, import, from this country, large quantities of alcohol, for the purpose of making brandy, and of re-shipping it to the United States.

The substances in the grape, which impart color, bouquet, taste and flavor to wine, are tartar, tannin, essential oil and the coloring matter of the husk. These form but one per cent. of it—the balance being alcohol, water and sugar. It has been ascertained, that, in the process of fermentation, not over a fourth part of these substances are taken up by the

wine, and that the most valuable one—the essential oil—can be obtained from the lees. This flavoring oil—the product of the grape—is mixed with an artificially-produced ænanthic ether, and constitutes what is known, in commercial parlance, as "Oil Cognac," and is used in manufacturing brandy.

This is found in market, varying much in quality of aroma and appearance. That which bears the highest price (about twenty-five dollars for a fluid-ounce) is of a pale amber color, and consists almost entirely of ænanthic ether, as produced from the grape, and is used for imitating the finer kinds of brandy. There is another variety—a mixture of essential oil and ænanthic ether—of a light green color, due to the presence of copper; another is colored pink by cobalt; others are white, yellow or brown—the greatest difference being in the quality of the ænanthic ether.

The properties of *pure* brandy are subject to some variation, arising from different growths of the vine. An experienced dealer and judge can always recognize the products of different provinces. Brandy is colorless when distilled, but acquires a slight amber color from the cask in which it is kept, or is colored by caramel (burnt sugar), which is said to render the spirit mellow and more palatable. Analysis shows pure brandy to consist of alcohol, water, volatile oil, ænanthic ether, coloring matter and sugar. Some varieties also contain a small portion of acetic ether and tannin.

Now, to show how closely modern manufacturers follow the guide thus given by analysis, in producing a *domestic* article, I will state some of the methods employed.

The highest proof-spirit is employed for imitating fine brandy, because less contaminated with the grain or fusel oil present in the raw whisky,—the most of it being removed by repeated and careful distillation. This spirit is reduced to the standard required—being that of equal parts, by volume, of absolute alcohol and water, called "neutral spirits," though this term indicates a spirit of any proof,—and is converted into brandy as follows:

A mixture (little over six ounces) of amber oil cognac, oil

of bitter almonds and etherial oil of wine, U. S. P., put into one hundred and seventy-five gallons of spirit, prepared as above, produces, with the assistance of a little simple syrup and more or less caramel, the finest varieties of pale or dark brandy. Sometimes a gallon of Malaga wine (a made-up wine) is added.

It is well known, that oil of bitter almonds is one of the deadliest of poisons, containing, usually, four times the amount, bulk for bulk, of anhydrous prussic acid, that our officinal solution (U. S. P.) of that acid does. The etherial oil is also highly poisonous.

A mixture, in all one and a half gallons, of acetic ether, tamarinds, sour cherry juice and a little *white* oil cognac forms, when put into one hundred and thirty gallons of "neutral spirits," pale or dark cognac, as may be desired, with caramel and simple syrup.

The *green* oil of cognac, with etherial oil, oil bitter almonds and tannin—in all, nearly six ounces—converts one hundred and fifty gallons of the neutral spirits into brandy. A few pounds of elder-flowers give it *mellowness*, and the tannin imparts *roughness* and *age*.

The *pink* or *brown* oils of cognac, make "Rochelle" brandy, when mixed in due proportion with acetic and peach ethers. It only requires of them seven ounces, to *doctor* one hundred and thirty gallons of neutral spirits—caramel as before.

It is, perhaps, well to remark, that manufacturers also require, in order to produce the *variations* of different *pure* brandies, bruised French plums, for their *acid and flavor;* wild cherry juice, for its *astringency and bouquet;* oak shavings, for their *astringency, color and odor;* catechu, for its *tannin and color;* powdered charcoal, black tea, ground rice, peach ether (a compound of oil bitter almonds and diluted butyric ether), and oil grape—a compound of the organic, radical amyle, possessing a strong, vinous odor. In connection with this substance, it is a singular fact that amyle is carefully separated, in one of its forms of combination—that

of fusel oil (hydrated oxide of amyle)—from the spirit, in first preparing it for the manufacturer's use, only to re-enter it, in another form, for the purpose of forming "Brandy."

Holland gin, when *pure*, is a spirit obtained by first fermenting barley and rye with hops, allowing effervescence to cease; then distilling, repeating distillation from juniper berries, which last gives it its peculiar aroma and diuretic properties. Age improves gin, imparting to it a smooth, oily flavor, much admired by many.

Three-quarters of the gin sold is entirely innocent of any knowledge of Holland. The *English cordial* gins, so much used as medical agents for their diuretic and carminative qualities, are all made up liquors.

There are, however, large quantities of gin shipped from Schiedam—though not *all* of it, for bottling as "Wolfe's Aromatic Schnapps," the product of the three hundred or more distilleries of that village, being several millions of gallons yearly.

Manufactured gin is made as follows: A mixture of oils, of juniper berry (freshly distiled) and angelica seed, in equal proportions, together with rum ether, oil of lemon, common salt, and simple syrup, is added to spirit of the proper proof, *neutralized* by means of *spirits of nitre*. Sometimes oils of caraway seed and fennel seed, with peach ether, are added to the above, to create an "Aromatic Gin," or to give *smoothness*, *richness* and *creaminess* to the liquor.

Creosote is used to give to gin a certain degree of smokiness; *caustic potash* is added to make it strong and biting on the palate.

British "cordial" gin is sometimes made of oil of bitter almonds, oil of vitriol (sulphuric acid), spirits of turpentine, oil of juniper, coriander seed, orris root, elder flowers, acetic ether, and sugar, in proper proportions, macerated in proof spirit.

Common gin is a crude distillation of whisky, from a mixture of spirits of turpentine and common salt with a *dash* of juniper berries.

Rum, when *pure*, is the distilled product of fermented refuse sacharine matter which accumulates where sugar and molasses are made. The best varieties are obtained from the West Indies, and are termed Jamaica, Santa Croix, and Kingston—the Jamaica being considered the best. The peculiar flavor of rum is due to the presence of a portion of empyrumatic oil which forms and passes over with it during the process of distillation.

Now, by distilling a mixture of black oxide of manganese, sulphuric acid, alcohol and strong vinegar, a peculiar etherine liquid is obtained, possessing the odor of rum in a remarkable degree; this, when mixed with essential oils, and colored brown, is termed, commercially, "Oil Jamaica Rum;" colored pink, and entitled "Oil Kingston Rum," or left of its natural color and it is "Oil St. Croix Rum."

A single ounce of the oil Jamaica rum, with a little essential oil of pimento (allspice), some acetic ether, a few pounds of sugar and ten gallons of water converts one hundred gallons of fourth proof spirit into "Jamaica;" or, by using white or pink oils, with some essence of lemon and spirits of nitre, the same quantity of spirit is converted into Kingston or St. Croix rum. Simple syrup, molasses, and caramel, are also used to sweeten, give smoothness and color to this liquor.

It is often remarked that if habitual drinkers would confine themselves to whisky — *that pure drink* — the probabilities are that they would average longer lives and be less subject to the horrors. This might be true if high proof alcohol was drank by them, properly diluted, but not when the common grain whisky of the still is used.

Common whisky contains a large percentage of corn or fusel oil (an oxide of the organic radical amyle), being produced during fermentation, and of itself volatile, though less so than alcohol, it passes over, in distillation, in large quantities. Repeated rectification only partially removes it. It is, in a pure state, highly poisonous.

I am credibly informed by an extensive alcohol distiller, that, in running highwines enough to produce three hundred

barrels of alcohol, he separated at least a barrel of crude fusel oil, one table spoonful of which, if swallowed, would produce fatal effects.

In order to cheapen the production of whisky, and of course at the same time lessen its wholesomeness, manufacturers are accustomed to *cover up* the flavor of the grain oil which the raw spirit contains—not *remove* it partially by rectification—by adding strong flavoring materials.

Peach whisky is fashionable. Where does the *peach* come from? When aqua fortis is distilled with benzole, a peculiar substance is the result which resembles in odor the oil of bitter almonds—this is the *peach* part of the whisky. Raw grain whisky is readily converted into *pineapple* whisky by adding a portion of an etherine liquid obtained by the action of oil of vitriol upon butyric acid. Butyric acid being the result of a fermented mixture of sour milk, chalk and putrid cheese. The smoke of peat converts raw spirit into *Irish* whisky.

Artificial flavors are sold for flavoring the spirit in imitation of Monongahela and Scotch whisky, and all that a barrel of raw whisky requires to convert it into "Bourbon," is two gallons of Jamaica rum, with a little oil of caraway and bitter almonds.

So much for distilled liquors.

Wines, generally, are so doctored by foreign growers to suit the vitiated taste of habitual drinkers of them, that after the addition of liquor tonic (brandy), sugar, and coloring matter, the best of them would hardly be recognised when compared with samples in their original state of purity.

All the best wines *imported* into the country contain a fair share of brandy; it is added to them previous to exportation, for the ostensible purpose of making them stand the voyage without fermenting, but, in reality, because the market demands *strong* wines.

The *manufacture* of wines has reached the greatest perfection. Essential oils and peculiar etherine flavors are produced

by the chemist, and with these and a hundred poisonous substances can wine—the produce of any variety of grape—be imitated.

Port wine, which, in a pure state, is a sweet, rich, aromatic wine, of deep color and mild taste, is required by those who use it habitually to be *strong.* The English, especially, prefer the strong port, and it constitutes the variety termed London dock, and is made by adding brandy, elder berry juice, and sugar, to pure juice port.

Of the other varieties of port, though some may reach us in a pure state, yet they are generally of a poor quality, being mixtures of wines of different growers, good, bad and indifferent.

Neutral spirit is the base of manufactured ports in this country, containing, usually, 25 per cent., by volume, of alcohol, flavored with "May wine ether," colored with elder berry juice, beet juice, or cochineal and caramel. The other qualifications of pure port wine are obtained by suitable additions of red tartar, catechu, tannin, sugar, honey and spices.

I understand that "British port" is manufactured of hard cider, red Cape wine, plum juice, red tartar, catechu, bitter almonds, cochineal, caramel, raw spirit, logwood, sugar, cloves, cassia and ginger, fined with bullock's blood.

I have seen a specimen of "Port wine" which is largely sold in this city, which is nothing but fermented elder berry juice, or elder wine.

Madeira wine, in a *pure* state, it is asserted, is exported to our shores in greater quantities than to any other country, because Young America likes this wine for its flavor, rather than strength. In a pure state, and when old, it has a pungent, bitter-sweet taste and nutty flavor; it is very fragrant, and is generally admired by wine drinkers. It is considered one of the most valuable of medicinal wines. It is *manufactured* from neutral spirit, to which a portion of good Madeira or sherry is added, with sugar, coloring matter, and flavoring, denominated "Ether of Madeira Wine," sold by importers of these flavors. It is also *made* by fermenting a mix-

ture of malt and sugar, and adding Cape wine, brandy, sherry and port.

Sherry, it is believed, we also get a fair share of, in a pure state—at least with nothing more than brandy in it, varying in amount from five to ten per cent. It is pale or dark, according to the amount of coloring matter it is allowed to take from the husk of the grape. This is the wine directed to be used in the manufacture of the medicated wines of the United States Pharmacopœia, from the fact that it contains no acidity.

As a made-up wine it is manufactured similarly to Madeira, and materials are used which will impart to raw spirit its peculiar dry, nutty flavor. British sherry is a wine obtained by fermenting sugar, ale-wort, raisins and yeast; then bitter almonds and orris powder is added, and the wine fined; or a spirit, obtained by fermenting parsnip juice with water and sugar, is mixed with a poor grade of Madeira, cassia, cloves and bitter almonds added, and the whole fined with isinglass.

Clarets are abundantly produced and consequently cheap, though some of the favorite varieties rank among the highest priced wines. They are as fully as abundantly manufactured from rough cider, a red wine from the Cape of Good Hope, catechu, spirits, bitter almonds, etc.

The less said about champagne wines the better, for there is more—several times over—exported to America and Russia alone than the whole champagne district in France produces; and in the immediate champagne districts are large establishments for the manufacture of artificial champagne. Our own countrymen are not at all behind in this branch of industry—and I believe that champagne and Jersey cider are now considered synonymous terms.

The Rhine wines, or "Hocks," as they are called, are nearly all made-up wines, and by the same means that the other wines mentioned in this article are manufactured. Some of the brands of Rhine wines bear fabulous prices in districts where they are produced and are never exported. It is the same so trywith all wines grown, all are subject to sophistication in the hands of dishonest producers, or the demand being greater

than the supply, tempts those skilled in the manufacture to so make imitations of them.

Throughout Europe wine is considered by all classes a necessary of life, its use is habitually indulged in; in fact, it constitutes almost the entire food of a large portion of the inhabitants of the southern part of the continent. It is a matter of fact, that but a tithe of the evils of intemperance are produced by indulgence in the use of such alcoholic liquors, when compared to those produced in England and America by the habitual use of "stronger tipples;" and while to the larger per centage of alcohol in the liquors used here may be attributed a portion of the difference in its effects, not a little is due to the poisons with which the largest portion of the liquor drank in our country is adulterated.

ARTICLE III.—*Practical Suggestions*, No. III. By J. ADAMS ALLEN, M. D.

Ten years ago Typhoid Fever was quite unknown in south western Michigan.

Physicians in extensive practice did not see a case in years, and some even went so far as to deny that it could exist here.

I do not now recollect of having a case in my own practice in this place prior to 1848. Of course it will be understood that a broad line of distinction is to be drawn between true Typhoid Fever, and the (unfortunately quite common) typhoid symptoms, presenting themselves in badly treated cases of remittent.

The type of fevers was periodical, and their treatment as simple as the teachings of Scripture. The merest modicum of experience and common sense, with a little Calomel and a good deal of Quinine, was about all that was requisite. Unluckily the latter articles were reversed in proportion, and of the first two, the first prevailed over the second.

Profuse catharsis by Calomel and its adjuvants, and then

excessive "alterative" use of the same, begat a vast number of "complications" and a vast number of pseudo-typhoid fevers.

Worse than the drugs of our brethren, even, the drastic nostrums of the newspapers raked through the bowels of suffering humanity and the lacerated surface became prolific of manifold diseases.

The choleraic diathesis which soon after supervened, proved to patients that their intestines were not to be trifled with. Then came Typhoid fever, and the irritable mucus membrane and excitable nervous system proclaimed inexorably that the RAIN of Cathartics was over.

Many would not see, they would only feel. They felt there was wrong somewhere, and so they went blindfold into Homœopathy, and their aforetime uneasy bowels yearned with sensations delightfully new under the sugar pellets and diluted nonentities of the ethereal practice. Some of them recovered even in spite of the sin of omission, and as usual each case thus fortunate was trumpeted as a triumph over the prior sin of commission.

Personally I consider this trumpeting about as Milton did that of Salmasius—'the sound thereof most of all resembles the results of accumulated flatulency.'

Agues are now infrequent—continued fevers are the rule, and true Typhoid often met with. This change of the endemic diathesis is one worthy of careful study. In my view it impresses great changes in treatment upon almost every case to be met with in general practice.

All the phenomena of Typhoid fever tend to convince us that it is essentially dependent upon a *materies morbi* in the blood. The results of treatment illustrate it, and I take for granted that it is as well established as possible without its being absolutely sequestered and demonstrated by the chemist.

A large amount of this *materies* unattended by efforts at elimination, involves the phenomena of Cerebral Typhus. A large amount and excessive effort at elimination induces the

graver forms of Typhoid (Abdominal Typhus); a lesser amount and active exertion presents the more common mild forms.

It is quite unfortunate that under the general term, "inflammation," are grouped a great variety of very different conditions. The term in fact is as indefinite as that of "fever." The intestinal affection in this disease is too frequently considered and treated as an inflammation, whereas it is no more nearly allied to common inflammation, than the small pox pustule and its surroundings are to the *tumor*, *rubor*, *calor* and *dolor* succeeding a healthy wound.

We are invited in practice to imitate the mode adopted by the *vis medicatrix naturæ* in endeavoring to eradicate disease. A better plan is to watch the tendency to death, and provide against it by such measures as scientific experience may suggest.

The tendency to death in the greatest portion of cases which have fallen under my notice has been by ulceration, hæmorrhage or perforation in the ileo-cœcal region. In every case examined, *post mortem*, the Peyer's patches have been involved, as sufficiently described in the books.

None have recovered after perforation—three cases. Three fourths have recovered after hæmorrhage—eight cases. With these exceptions the disease has proved very amenable to treatment, and the results satisfactory.

I must be permitted to say that the so called complications, gastritis, pneumonitis, meningitis, &c., have been infrequent under my observation, though frequently my professional friends have insisted that certain symptoms proved their existence. If these various organs were inflamed, the inflammation was of such a character as to merit quite a different name and treatment. In my view, too much ammunition has been wasted on "complications," especially by the book-writers. They might as well devote their batteries to the gouty toe, and neglect the gouty carcase.

Nothing is more true than the statement that in Typhoid fever while there is life the case is not hopeless, and while there is any disease there is danger. In the first case of per-

foration of the bowel in my practice the patient had so far convalesced as to be up and about, and there was absolutely no external or rational indication of remaining disease—and yet while at stool the pains of perforation came on and he sunk and was dead in six hours. On the other hand I have had patients apparently moribund recover, in very spite of the prognosis.

The diagnosis is easier made than given. I rely upon the group of symptoms in the outset, and the roseolar eruption later as pathognomonic.

I. Languor, lassitude, mental hebetude, diarrhœa, epistaxis, continued fever, slight bronchial cough.

II. Roseolar Eruption—*always* present if carefully looked for, tympanites, sudamina, deafness, dryness and redness of the tongue, gurgling in the ileocœcal region (often with tenderness) upon pressure (French method), nervous symptoms, delirium, subsultus, &c.

III. Gradual convalescence. Or deepening of previous symptoms to constant delirium, coma, involuntary discharges, retention of the urine, prostration, &c., &c.

Average duration of treatment, nineteen days. A few cases will spin out to four or even six weeks.

Treatment. No emetics. No blood-letting. No active cathartics, except in the cerebral form with torpid bowels—*rare.*

First importance—quiet sleep at night. For this purpose I prefer a single full dose of Pulv. Ipecac. Comp. The cases are very few when a large dose of this will not secure sleep, provided the patient does not fancy he has an idiosyncrasy with reference to opiates. (*Mem.* The less a patient thinks he knows about medicine, the more likely he is to be benefitted.) Rarely some other narcotic may prove useful.

Second point—that the bowels move once a day and no oftener. I prefer to check the diarrhœa Pulv. Opii and Acct. Plumbi in moderate doses, p. r. n. To move the bowels Ol. Ricini vel Olivæ with twenty or thirty drops of Sp. Terebinth.

Practically in this disease I deem all saline cathartics objectionable.

Third item—control febrile action by external sponging, cool air, free ventilation, cooling diuretics and diaphoretics. The diuretics are particularly preferred. Especially Acetas Potassæ: 1st because it is practically useful by experience, 2d, because it eliminates a larger amount of solid matter through the urine than any other known article. For instance this:

R. Acet. Potasæ dr. ij—oz. ss.: Sp. Nitri Dul. oz. ss.:
Pot. Tart. Antim. gr. ij.: Aq. oz. iij. ss.
M. Two teaspoonfulls every three hours.

If it inclines to purge add Tr. Opi. Camph. q. s. or Tr. Opi. The hobby of the hour, Tr. Verat. Virid., may be substituted for the Pot. Tart. Antim. either in or out of the mixture for its known effects. In my opinion it controls symptoms well but shortens no disease. It is hence infinitely inferior to the Antimonial. It is more liable to leave a red tongue and augmented intestinal disorder. It is neither restorative nor depurative except in dangerous doses. In perhaps the majority of instances I rely upon the simple solution of the Acet. Potassæ without adjuvants. Later in the disease Liq. Ammon. Acet. is substituted occasionally. In this connexion, I beg leave especially to recommend free and constant use of the Acet. Potassæ. No other diurtic or diaphoretic has anything like its power as a febrifuge and eliminating agent in continued fever. I cannot but believe from long and close observation of its effects that it relieves the system of that material which is tending to excretion by the ileocœcal region, so prominently deranges and destroys the glands and other structures of that part.

It lessens thirst and thus obviates the necessity so often felt of deluging the stomach and bowels with diluents, eminently nasty decoctions and shadowy soups. Hence diarrhœa lessens, and tympanites with the accompanying train of nervous

symptoms abates. There will be less need of Valerian, and Assafœtida with its after effect of horrible odors.

Fourth proposition—When the red tongue, especially if dry and shining, appears, my experience adds nothing to the instructions of Prof. Wood as to the employment of the Ol. Terebinth, except a most cordial and hearty endorsement. It is *the* treatment—and the *ne plus ultra* of satisfactory treatment. In a very few cases, I have found that it would not be borne, and these cases have responded readily to moderate doses of mercurials—not carried to salivation. With this latter exception I have found no use for mercurials in typhoid fever.

Fifth—As "a looker on in Verona" I have seen alcoholic stimulants used freely in the Typhoid fever, but must enter protest against them as a mode applicable to rustic constitutions. The cachectic crew that throng the fever wards of metropolitan hospitals furnish no standard by which country practice is to be guided—especially as the results here would speedily drive the practitioner from his "field of labor."

In the vast proportion of cases they are unnecessary and as hurtful as they are to the healthy man. Their abstraction when once commenced with, produces proportionately the same effects as upon the habitual tippler. In my view, considering the terrible consequences attendant upon the use of alcohol, it is the duty of medical men to avoid its prescription except in cases clearly and distinctly demanding it. In my experience it is of trivial value in the disorders now under consideration, and liable to the production of serious mischief. It will allay the nervous semptoms, it is true, but is not unlikely to aggravate the intestinal ulceration. At the very best, I have noticed that those who rely upon it, have very sick patients and a multiplicity of "complications."

Patients rarely die of simple debility—the reason of death is deeper, and we have no evidence, theoretical or practical, that alcohol searches it out. A much more useful stimulant is furnished in Carbonate of Ammonia, Aristol. Serpent. is also very frequently quite serviceable. The stimulus they

afford is more akin to the natural forces beyond this, and they do not gorge the blood with carbon. But in the—

Sixth note—appropriate diet is beyond all other means the real sustaining power. Concentrated nutriment is easier digested than attenuated dilutions. Dish water slops will rumble along the canal and so outward, in one perpetual flood. Nourishment should be communicated so as not to require mastication, but should be retained in the mouth long enough to become fully insalivated. This simple thing alone will moisten many dry tongues. While there is much activity of febrile action it is better to eat nothing, then farinaceous boluses (not slops), then strong essence of beef (not "beef tea"), then hashed beef, then such meat as the appetite craves and the teeth are willing to thoroughly masticate, commingled with bread &c., up to ordinary diet.

There is no objection to some condiments, as black pepper and salt. A table-spoonful of essence of beef has more supporting power than the same quantity of brandy—but dilute it with slops, and it *will* go with the "chocolate."

When the blood begins to show signs of impoverishment, not only must nitrogenized animal food be freely administered, but there will be a saving of alcohol and vital power by mingling a generous proportion of animal fat. But upon this point I need not enlarge as it was sufficiently set forth in No. II, of this series. It is fearful to think of the number who have died of inanition, whilst some old crone, or old crone's adviser, has been assiduously skimming off the scattered globules of oil from the boiled shadows of the valetudinary *soup maigre.* Sick diet! *Lucus a non lucendo!*

Seventh particular—The drinks should never go beyond what will be speedily absorbed from the mouth, throat and stomach, The patient will rarely suffer from thirst if treated freely with the salt above indicated.

Eighth—last but not least. Free ventilation is all important. Poor people recover in the country better than rich ones. Because the healthful air and salutiferous light are not excluded. No place outside of a hospital (the charnel house

of typhoid fever) is worse for the patients than the close, heavily curtained, heavily carpeted and cumbrously furnished rooms of the affluent. No patients are so subject to pulmonary complications as those who are carefully guarded from "taking cold." A feather bed is herein an abomination. The entire paraphernalia of the couch should be changed daily. One day for service and one day out of doors. The evacuations are pestilential—out of doors with them *instanter*. The emanations are pestiferous—dilute them with outer air and sunlight. Have nothing in the room more than twenty-four hours in succession which is capable of absorbing effluvia.

Do not keep out the blessed sunlight or pure air. Put on a cheerful visage, even if playing Sir Oracle. The awakening and sustaining pleasant emotions in the patient's mind is worth more than a gallon of "Huxham."

The subject of medicinal tonics will be adverted to in another connection hereafter, the length of this paper warning me that it is a misdemeanor to trespass unduly upon the columns of the *Independent*.

Kalamazoo, July 8th, 1857.

ARTICLE IV. *Cases Reported at the April Meeting of the St. Joseph County (Indiana) Medical Society.* By L. HUMPHREYS, M. D.

CASE I. *Perforation of the walls of the uterus and bladder, during parturition, from exostosis upon the body of the pubic bones—resulting in death.*—Friday, February 13th, '57, was called to see Mrs. M., aged 23, who was in labor with her first child, at full term. The patient was of nervous-sanguine temperament—nervous predominating; complexion fair; light hair and eyes—with decided scrofulous diathesis. The patient had been seen two or three times a day on the 11th and 12th, but the uterine efforts were so slight as to require no assistance. On visiting her the after-

noon of the 13th, found the pains more expulsive, and an examination of her vaginam revealed the os dilated to the size of a half-dollar, but rigid. During the afternoon and night, the labor made a tardy progression—but not more tardy than most *first* labors ordinarily do. At two o'clock next morning—the rigidity of the os-uteri and soft parts generally continuing—bled the patient freely from the arm, after which pains of medium force took place, the mouth of the uterus and soft parts becoming relaxed in a good degree, and labor, in the proper acceptation of the term, set in—the former uterine efforts being only preparatory. The presentation was in every way natural—the occiput behind the right acetabulem, and the os frontis resting against the left sacro-illiac junction. At seven A. M., the membranes were ruptured, the fluid contents of the uterus escaped, and soon after, the head became well engaged in the superior strait—the vertical tumor of the scalp protruding into the inferior strait and in the direction of the vulva. During the time that the several examinations were made, per vaginam, the presence of several sharp, spinous projections or elevations was detected upon the posterior surface of the body of the pubic bones. Throughout the day, on Saturday (and the second day of the labor proper), the parturient process progressed *slowly*, each hour's uterine effort advancing its contents, and giving promise of a happy termination. During the night the pains continued much as they had been through the day, with an occasional subsiding of their force, and the procurement of rest, for an hour or two at a time, to the patient, from the exhibition of anodynes. At six o'clock on Sunday morning, the head was partially engaged in the inferior strait, the tumor of the scalp resting on the perinæum —producing, in some measure, the ordinary perineal tumor. Prior to this time, the mind of the patient had been remarkably cheerful and buoyant—nervous system calm and quite free from undue excitement, considering the temperament of the patient; but now the nervous system became much excited, the brain keenly alive to impressions from noises of

any kind, the mind disposed to wander, pupils of the eyes much contracted, anxious expression of the countenance, respiration hurried,—in short, the well-marked symptoms that precede congestion of the brain were present. Add to this nearly an entire suspension of the pains. Drs. Dayton and Buchtel being in consultation, it was decided to apply the forceps, and terminate the labor as speedily as possible. The patient was rapidly becoming delirous, and resisted any and all attempts at instrumental delivery. Chloroform was given carefully until the patient was fully under its influence. Notwithstanding its full anesthetic effects, it failed to control delirum and resistance, on the part of the patient, to any attempt at successful manipulation. Repeated efforts were carefully made, by the consulting physicians and myself, to introduce and apply the forceps—which were only partially successful, on account of the contortions of the patient's body and limbs. As some exhaustion had been produced by these efforts, it was deemed best to give the patient an anodyne, and permit her to rest, before using any other efforts to terminate the labor. The respiration, in the mean time, continued hurried, delirum more marked, the pulse rapid and feeble, great physical inquietude, and disposition to change position on the bed—in short, nearly all the symptoms that accompany congestion of the brain, were present, with tendency to sinking. Stimulants were repeatedly attempted to be given, but without success, as the patient resisted all attempts at the exhibition of any agent by the stomach. A fatal termination of the case was now evident, and all future efforts at delivery were abandoned as useless and unwarranted. The patient continued to sink until death closed the scene on Monday morning. It would be proper to state here that the bowels and bladder of the patient were frequently and freely evacuated from the commencement of labor, until delirium set in; that often during the parturient efforts, free discharges of urine occured, so much so as to saturate the clothing underneath the patient, as was evidenced by the unmistakable odor of that secretion.

Autopsy, twenty-four hours after death: Abdominal tumor very large—rendered so by the contents of the womb and the presence of gas—the latter making a prolonged and forcible escape at the point of first incision. The first object presented was the bladder, much distended, containing considerably over two pints of urine, which, after being drawn off, was followed by a discharge of fully as much bloody serum. The neck and lower third of the bladder were firmly pressed against the pubic bones, at the symphysis; on opening the bladder, the mucous lining and blood vessels upon its posterior surface were congested and engorged, near to, and to the right of the symphysis pubis; the coats of the bladder and uterus were punctured, the aperture being a little over two inches in length, and *through* which the left ear of the child protruded into the bladder. This opening was behind and opposite to one of the sharp, spinous ridges or elevations before referred to, on the body of the pubic bones, and had been produced by pressure of the presenting part of the child against the walls of the uterus and bladder, immediately over the sharp bony elevation. The exostosis was not elevated quite one-fourth of an inch above the surface of the bone. The fluid contents of the womb had in part escaped through the aperture into the bladder, and again back from that viscus into the womb, and from thence out through the vagina, accounting for the frequent and copious discharges of urine, before referred to, saturating the clothes under the patient. The vessels and tissues of that part of the womb where the puncture took place presented a deep, dark red color, furnishing incontrovertible evidence that it had been the seat of disease prior to the parturient effort. The point where the perforation took place had been the seat of severe lancinating pains several weeks before confinement, particularly if the patient attempted to walk or remain in a standing posture for any length of time. Indeed, she was nearly disabled from walking for some weeks prior to her sickness and death. During the patient's girlhood, she had suffered from displacement of the uterus, and had often severe and prolonged attacks of leu-

corhoea. The child was perfectly developed and weighed ten pounds.

CASE II. *Typhoid Fever accompanied with Gangrenous Vesicles upon the skin, and extensive Ulcerations and Sloughing of the Cellular Tissue—resulting in death.*—Mrs. H., aged forty-three, of nervous leucophlegmatic temperament, was taken with the usual symptoms of typhoid fever, January 29th, '57. The patient had suffered from the premonitory symptoms for near two weeks prior to that date, but did not apply for treatment until that day: found much nervous irritability—bowels constipated, skin dry most of the time; occasionally slight perspiration over the surface of the body, tongue inclined to dryness, and slightly coated a light-brown; febrile movement mild, but almost continuous—pulse from 96 to 120 per minute—towards the termination of the case much more frequent. The patient had suffered for many years from indigestion and general bad health—great aversion to the use of remedies—especially such as are termed by the masses "strong remedies." Occasionally during the progress of the case there was delirum of a mild character, not much subsultus tendinum *and* the typhoid symptoms were not very *strongly* marked. Nothing occurred during the progress of the case out of the ordinary course of typhoid fever, until near the close of the third week from the attack—when a tumor or swelling, of about three inches diameter at the base, made its appearance upon the right side of the trunk—over and near the angles of the 8th 9th and 10th ribs of a carbuncloid character. The central portion of the integuments covering this tumor was quite black, and when the cellular tissue became denuded, it presented a dry and blackened appearance, secreting a dark sanious matter in small quantities, of a very offensive character. Soon after the appearance of this tumor, there appeared in various places over the surface of the body—mostly over the abdomen—gangrenous pustules or vesicles, having diameters of from one-fourth of an inch to two inches; there were from forty to fifty of these over the stomach and bowels at one time—besides others situated upon other

parts of the body—these all secreted and discharged more or less matter of the character of that thrown off by the carbuncle. The edges of almost all of the ulcerated spots, were more or less ragged and irregular—dark or purple in appearance, the ulcer showing no disposition to healthy granulations, and strongly disposed to burrow into the surrounding cellular tissue. The local applications to the largest of the ulcers were pulverized charcoal and peruvian bark, equal parts, moistened with brandy and a solution of creosote, applied in form of poultices, alternated with stimulating ointments. The integrity of the surrounding tissues was maintained as nearly as possible by the application of stimulating plasters.

The general treatment consisted, in the exhibition of stimulants—such as brandy, wine, ale, and porter, alternated with sulphate of quinine, and the various preparations of iron—(principally the syrup iod. iron), the compound tinct. peruvian bark, and occasionally alterative portions of mercurials. Anodynes and nervines were, also, given as occasion required. The exhibition of the oil of turpentine was also attempted in various ways, but was not kindly received by the stomach. Nourishing and to some extent stimulating diet was given at regular intervals of time: stimulants—especially brandy and wine—constituted the principal agents in the general treatment: their effects were very satisfactory in contributing to the comfort as well as the improvement of the patient—and their use in very large quantities was absolutely demanded in order to sustain the sinking energies of the patient's life forces. The patient was more like a decomposing corpse than a living woman, so extensive were the ulcerating patches upon the surface of her body. Under this treatment, general and local, there was a marked improvement in the condition of the patient—the ulcerating surfaces put on a more healthy appearance—secreting an almost healthy pus, the ulcerated excavations began filling up with healthy granulations, and the appetite became much improved. Notwithstanding this apparent improvement in the case, emaciation took place rapidly, produced no doubt by derangement of the assimila-

tive functions, and by the secretion and discharge of large quantities of pus from a dozen or more large ulcerating surfaces, and a great many small ones—and the formation of new abscesses daily of greater or less magnitude, coming on so stealthily, that no indication of their approach would be given, until the existence of a sub-cutaneous *marsh* in the cellular tissue would be indicated by a sense of fluctuation, which, upon being punctured, discharged large quantities of matter. The case terminated fatally on the night of the thirty-seventh day of treatment—and about the fiftieth day from the beginning of the attack. During the last two weeks of the period of sickness, the stethoscope indicated considerable bronchial affection—resulting at different times, in a profuse secretion and pouring out of a thin tenacious mucus, which sometimes seriously impeded respiration, and threatened the life of the patient from suffocation—this continued to annoy the patient to the end of life, and was one of the prominent means of destroying life.

The functions of the skin, and of the mucous linings of the air passages and intestinal canal, being so closely allied, may we not infer, that if the ulcerative disease of the skin had not taken place, some such diseased action of the mucous linings would have been the result, illustrating the worst form of typhoid secondary disease—in short, that the patient presented the appearance upon the external surface of the body, that often results in typhoid cases upon interior mucous surfaces—or in other words may we not look upon this case as what is often the result of secondary typhoid disease the patient as it were *turned inside out.* Among other peculiarities in this case—although the evidence is beyond question of its typhoid character—the brain and nervous system were but little involved. The patient had occasionally slight delirium and towards the latter part of the term of sickness, some nervous agitation and slight subsultus tendinum—sometimes appearing sunk in stupor, yet no true coma—but rather the stupor of exhaustion—for when aroused the patient's intelligence was good. During the entire period of the case there

were no maculæ or petechiæ. The extraordinary eruption of gangrenous patches was in no way, of the character of ordinary bed sores—it was not the result of pressure—they were found in greatest abundance on the anterior part of the thorax, and upon the abdomen. The vessicles became hard first at the top—then black, and soon the mass dropped out—leaving an excavation with ragged edges—looking as if it had been taken out with a gouge.

The case was one of great interest to the consulting physician and myself. The contest between life and death, during much of the period of sickness, was so evenly balanced, as to render the prognosis extremely difficult. The patient finally succumbed from exhaustion, brought on by the enormous drain from the numerous ulcerated surfaces—and the depletory effects of the pouring out of large quantities of mucus from the linings of the air passages. Perhaps the absorption of matter had its share in bringing about a fatal termination of the case.

South Bend, Ind., June, 1857.

Article V. *The Medical Plants of Michigan.* By Edward Dorsch, M. D.

An old proverb says: "No prophet is appreciated in his native place,"—and the proverb is a true one, for we find it so in scientific and every-day life. Our own manufactures can not please the taste of our ladies, and we have to import the laces of Brussels, the silks of Lyons and the shawls of Cashmere. Our most velvety peach does not tickle enough the palates of our gourmands, and ship-loads of pineapples and bananas have to arrive from far-off regions, to quench our thirst and delight our gustative nerve. As the traveler sees a fairy-land in the distance, which induces him to rove from shore to shore, our imagination covers all that comes from remote regions with a rosy cloud, and our fancy, contin-

ually wandering from pole to pole, makes us forget the rich treasures Nature has placed within the reach of our hand. We hasten over dreary deserts and scorched mountains, to dig and wash the golden dust of California; and the golden grain, the real wealth of our country, is neglected, and rots in undrained fields. Human nature, the great enigma not yet solved, finds it easier and more desirable to toil for problematic gain, than to earn the daily bread quietly, using the means which are most available. Indifferently we tread under foot the modest violet with the sweet fragrance, and stand admiringly before the green-house plant, which opens a sickly calyx without perfume.

And so it is in the medical profession too. If we look in our Materia Medica and Dipsensatory, we find the largest chapters dedicated to foreign plants and products; and in our prescriptions, we hunt for the strangest names and the rarest remedies. We run to the drug-store for an East-Indian plant, and stumble over the root in our garden, which possesses the same healing properties; we pulverize, by the sweat on our brow, the hard and worm-eaten root of Southern Africa, and forget the green vine, which climbs up to our window, as if to induce us to try it.

Not that I wish to declare war to all foreign drugs: by no means! I am not Know-Nothing enough to expel these kind foreigners, which heal our diseases, from the shelves of the apothecary; but I wish a place reserved for the children of our woods and fields, for which Dame Nature was no stepmother, and which are endowed with rarer qualities than we usually suppose. Some of our drugs from abroad are becoming dearer every year, and would it not be worth great effort to find means of supplying them by native plants? If our beautiful *asclepias syriaca* with the milky juice and the silky fibers, should prove to be an equal of the cinchona, why continue to curse it as a useless weed, when it shoots up in our garden-beds and in our orchard? Why should we buy the vile pulverized rhubarb and jalap, which the drug-stores offer (and which frequently do not operate), while the May-

apple (*podophyllum peltatum*) grows in the shade of our fences—not only offering a palatable fruit to our harvest laborer, but containing in the root a cathartic for the fever-smitten, which finds hardly its equal in the whole materia medica.

Certainly, many of our physicians have already used indigenous plants; but they resort, in their practice, only to a few favorites, and the difficulty of procuring them at the apothecary's shop forces the busy practitioner to come back to the common track. Surely, it would seem like arrogance if I should pretend to say how physicians should prescribe, and I do not feel at all inclined to do so; but I may be allowed to draw the attention of the faculty a little more to our home treasures, by specifying the single plants, and the benefits derived from them, as proved in my own practice, and learned from other reliable sources. If other physicians follow, in examination and experiment, we shall find, in a couple of years, results which we have not dreamed of, and can enrich the dispensatory with cheap and effectual remedies. As I do not intend, at present, to write a systematic treatise on this subject, it may be just as well to take up the plants as season and occasion offer them, not regarding natural family and order. In future time, perhaps myself or somebody else can rubricate them.

To begin with one of the most remarkable families of the vegetable kingdom, the solanaceæ, which furnish so many valuable remedies, I commence with a plant to be found in all pharmacopœias, but very nearly obsolete in America,—I mean the dulcamara, usually called woody nightshade—bittersweet.

Everybody knows this delicate climber, with the clusters of violet blossoms, and bright scarlet berries in autumn. According to Wood's Class-book of Botany, the solanum dulcamara is a flexuous, thornless shrub; leaves ovate, cordate; clusters cymose; stem branching, several feet in length, climbing about hedges and thickets in low grounds; to be found from New England to Arkansas; lower leaves

entire, the upper ones becoming auriculate or hastate; flowers drooping, on branching peduncles from the side of the stem; corolla of five reflexed segments, purple, with two green spots at the base of each segment; berries bright red. It blooms from June to August. Linne placed it in the fifth order, *petandria, monogynia.* For the druggist, I may add: the twigs or stems are round, the older ones covered with brownish-green, the younger ones with pale yellow, sometimes gray looking, cortex; fruit red, eliptic, smooth, two-celled, many-seeded, juicy; seed kidney-shaped. Fresh-crushed leaves smell nauseous, benumbing; taste bitter, afterwards sweet; berries bitter and poisonous—stalks and stems only are to be used.

Its chemical ingredients and properties can be found in every pharmaceutical compendium; and, *en passant*, I may mention, that the picroglycion, detected by Pfaff, seems to be identical with Desfosses' dulcarin. The solanin, which Desfosses prepared from the berries of solanum nigrum, from the unripe fruits and young shoots of solanum tuberosum (potato), is contained, in greater quantity, in the leaves of the dulcamara, than in the stems. This may account for the narcotic effects of this plant, if given in large doses, and its singular operation upon the cerebral and spinal system.

According to the ingredients, we find in the dulcamara two principles—the narcotic, represented by solanin, and the saccharine, represented by dulcarin or picroglycion. The first operates mostly upon the nervus sympathicus, with all its ramifications, and shows, like other acrid narcotics, its deteriorating effect upon digestion and the whole tractus intestinalis; the other, sweetish-bitter, principle combines the soothing, relaxing properties of saccharine matter with the tonic power of bitter remedies, and acts principally upon the mucous membranes, increasing the slow, and starting again the retained secretions, correcting and improving the pathological products of the mucous and sero-fibrous tissues.

(*To be continued.*)

Bibliographical Record.

The History, Diagnosis and Treatment of the Fevers of the United States. By ELISHA BARTLETT, M. D., late Professor of Materia Medica and Medical Jurisprudence, in the College of Physicians and Surgeons of the University of the State of New York, etc., etc. Fourth Edition—revised by A. CLARK, M. D., Professor of Pathology and Practical Medicine, in the College of Physicians and Surgeons of the University of the State of New York. Philadelphia: BLANCHARD & LEA, 1856.

The extent, to which fevers prevail, the frequency of their recurrence and the bereavement and suffering which they occasion, all are sufficient to keep alive an interest in, and attach a consequence to, this class of diseases, which scarcely belongs to any other in the domain of nosology. The past, of medical history, does not fail to record its ravages, or to portray the obscurities in which it is involved—much less, the difficulties attendant upon all investigations concerning its nature. The discovery of the American Continent imparted still greater interest to this variety of diseased action, adding new complexities, by inducing, to some extent, new forms or modifications, and furnishing the *great remedy*—almost a panacea—for the palludal variety of fevers, if not for diminished vitality, by whatever causes produced. Its unbounded extent, its dense and unbroken forests, the luxuriancy and vast variety of its vegetable productions, the great diversity of its climate, its towering mountains and immense valleys and prairies, as well as its mighty rivers and inland seas, have given additional consequence to every fact and circumstance connected with fevers. Not only so, but the influence operated upon the mind and affective faculties, and the innumerous new and inviting avenues to enterprise and adventure, connected with America and American society, tending to induce a highly impressible condition of the nervious system, if not of the entire organism,—has furnished another element in the etiology of fevers, which greatly enhances the importance of the general subject. These several considerations seemed to give rise to a necessity for a new work, exclusively devoted to this extended field of research—a work, which should embody, in a somewhat analytical form, all the important facts, in reference to the etiology, the phenomena, the pathology and the treatment of fevers, distributed over the great

commonwealth of professional literature. It was peculiarly fit, too, that an American physician should assume the task, and, while we indulge a just pride—something bordering on patriotism or national complacency—that our countryman has felt himself competent and has "played his part" so well, we confess, we would have been better pleased if he had treated his subject—as we think he should have done—more philosophically,—less under the arbitrary dictation or controlling influence of a single idea. This suggestion may require a word in explanation. We mean, simply, that while the author has been sufficiently analytical and precise in his notices of symptoms, pathology, diagnosis, &c., to impart, to the reader, a tolerably distinctive view of the order of succession of the aggregate phenomena of fevers; while the style of composition is neither turgid nor remarkably labored, on the contrary, is chaste and rather explicit, we fail to discover in the work that grouping of actual phenomena, and that systematic generalization, which the mind, in its search after truth, seems to demand, in order to a philosophical comprehension of the subject before it; of which, in our judgment, it is susceptible, and which—if the writer had deemed it adivsable to have investigated a little further. or, having investigated, could have given credence, or duly appreciated—he must have discovered had been, to a good degree at least, accomplished by another. We mean, further, that we cannot fail to perceive that he has committed himself to a particular school; and that, in the prosecution of his labors, he has sought to bring every fact and circumstance into a coherent and supporting relation to the special doctrines of *that school*, whilst he neglects, touches but lightly, or entirely ignores, all those facts and circumstances which tend, in the least, to contravene the doctrines and reasonings which he has adopted as his own. We have been forcibly impressed with these considerations, in all our examinations of the successive editions of Dr. Bartlett's work, and nothing that we have been able to discover in the one now under notice, tends, in the least degree, to change our earliest opinions. Unfortunately for his labors, and not impossibly for science, Dr. B. was not permitted to supervise the issue of the edition before us. The relentless hand of Death interposed to terminate a career, which if permitted to continue, might have developed results truly ennobling to the author, and fraught with the weightiest consequences to mankind. And here, we may be permitted to observe, that, too often to our "finite ken,"

the monster's darts are permitted, providentially, to be pointed with deadly aim at the loveliest and most deserving of our race. In the language of the sentimentalist, "Death loves a shining mark;" and, in this instance, there has been no departure from his characteristic predilictions, so often emphatically declared. It was fortunate, however, that the author, in view of the approaching severance of the link that bound him to "things terrestrial," should have made choice of so worthy and competent a writer and teacher as his literary representative, as he is, whose name occupies a place on the title-page. Dr. Clark has performed his part with a candor and earnestness characteristic of true friendship and, we have no doubt, of the innate promptings of the *man.*

We did not propose, when we sat down to our task, to attempt anything like a critical analysis of the work. To do so successfully, would require nothing short of a review of the entire subject—a statement of the comparative merits of most, if not all, the doctrines and theories of fever, which have been offered to the world. In short, it were to produce a new work. But there are a few things, in reference to the first part of the treatise—that devoted to Typhoid Fever, and on which the author manifestly expected his fame, as a scientific medical writer, to rest—which may justly call forth animadversion.

He observes, "I have adopted the term typhoid fever, simply because it is not particularly objectionable, and because it seems to be coming into general use,"—It is that, most commonly given to the disease by the French, and has the advantage of marking the peculiar lesion of the disease, while it is free from the objection of prejudging by any implication, its nature or character." The following quotation, from article second, presents the reader with another reason for his choice of a name, "Since, however, it has been ascertained that the disease differs, in many important respects, from the Typhus of British writers, it has become manifestly necessary to apply to it some other appellation; and, in conformity to the example of Louis Gerhard, Jackson and others, I have chosen that of *Typhoid Fever.*" Now it is granted that terms may be arbitrarily appropriated and we concede it to be the prerogative of an author to attach such meaning to the technical expressions, he chooses to make use of as declare, most satisfactorily to himself, the ideas, the facts and the principles, he proposes to promulgate. While, however, this much is admitted, we insist that it is incumbent on him to have regard,

somewhat, to literal construction and the actual relation of the thing, principle or quality, to its representative. We take it, but few who reason and are guided by sound logic and the analogies of language will appreciate highly, the selection and use of a term of designation, merely "*because it is not particularly objectionable*, or because it *seems to be coming into general use.*" Nor will such be more favorably impressed with the term, as applied by the author, when informed "It is *that* most commonly given to the disease, by the French," or because one distinguished writer, or a few, even, have chosen it, if neither literal construction nor the natural relation of the thing, represented to the term or expression that represents it, be left entirely out of the question. If the term be used to express likeness, similarity or resemblance—its true, literal meaning,—as in the case of varioloid, it certainly is admissible, inasmuch as it leads to no ambiguity. Many terms, in medical nomenclature, are of like construction, as mastoid, hyoid, etc., which, kept closely to their primitive meaning, are sufficiently definite and significant. So long then, as the word *Typhoid*, is made to represent an individual of a family—a variety or a species, we have no desire to institute a quarrel with it. But when it is made the representative of a genus or of an individual, sui-generis, it is manifestly a perversion, or, at best, it assumes the character of a literary conventionalism. It is divested of its true literal signification, and gives rise to embarrassment, if not to conclusions, which are calculated to mislead, in practice. But it is said to have "the advantage of marking the peculiar lesion of the disease, while it is free from the objection of prejudging, by any implication, its nature or character." We are not altogether prepared to appreciate the scope and meaning of the first of these postulates. By the term lesion, we understand some "marked change in the exercise of functions, or in the texture of organs." We suppose the author designs it, in this connection, to represent the anatomical alteration in the spleen, the agminated glands, or "eliptical plates of the ileum," and in the mesenteric glands, which he conceives to constitute the marked characteristic of the disease; "which disease, thus characterized and defined," he declares, "differs essentially from *all others, in its causes, in its symptoms and in its lesions.*" How, then, it may be asked, does the term *Typhoid* possess "*the advantage of marking the peculiar lesion of the disease?* What is there about *it*, literally or conventionally, whence the reader can *possibly* infer the pathological

condition, which, under circumstances of constant and uniform occurrence, the author concludes "ought to be final and decisive in regard to diagnosis." Certainly, we are singularly obtuse, if aught belongs to it, which "marks the peculiar lesion of the disease." If derangement of function be involved in the meaning of the word, it has not appeared obvious to our vision. If so, it must include all, for it is difficult to conceive, according to our observation, and it is believed, according to all sound observation, of any disease, in which the functions of the economy are so completdly and universally perverted as in continued fever. The "*advantage*" claimed, then rests, for aught we have been able to discover to the contrary, on assumption, unsustained by proof. Nor are our perceptive faculties any more susceptible, in regard to the last of the two postulates, contained in the foregoing quotation. It may not "prejudge by implication," or otherwise, either "the *nature* or *character*" of the disease, if by the clause, "nature or character," is designed to be understood, the precise *condition* of *vitality* and the intrinsic *kind* of *morbid action*, that obtains, during the continuance of the disease. But if the reader can suppose, that this clause relates to the anatomical lesions referred to above, we confess we are at a loss to conceive how he can do otherwise than conclude, directly in opposition to the author, that it *does*, emphatically, *prejudge*, not "by implication," but directly and unequivocally, both the "*nature and the character*," of the disease. But *is* it *ascertained* that the Typhoid Fever of Louis, Gerhard, Jackson, Bartlett and others "differs in many important respects, from the *Typhus of British writers?*" And *was* it "manifestly necessary," therefore, to seek some other appellative, by which it might be designated? In reference to these points, it is believed that a searching comparison of medical opinions and doctrines will scarcely sustain the declarations of the text. Unquestionably much more is required to be known of the intrinsic nature of continued fever, in its different phases and complications, before it will be conceded it "*is ascertained*," etc. But that the reader may clearly perceive in how many "important respects," these two alleged fevers do *really* differ, the one from the other, and how thoroughly Dr. Bartlett was himself convinced of such difference, let us compare, for a little, *his* definitions of the two, as found on pages 170 and 327, of the edition, before us.

Let the author speak for himself:

"*Typhoid Fever*," he remarks, "is an acute affection, occurring most frequently, between the ages of fifteen and thirty years, rarely after the fortieth year of life; attacking, at least, in cities and amongst adults, in a large majority of instances, persons who are recent residents."

"*Typhus Fever* is an acute affection, occurring at all ages of life, attacking adults,—in cities, somewhat more frequently, persons, who are recent, than those who are old and permanent residents."

Typhoid is, "occasionally, and under certain conditions, capable of transmission from one individual to another."

Typhus is "often transmitted directly from one individual to another."

Typhoid is "more common in certain countries than in others; but not confined, so far as is known, to any geographical localities or regions."

Typhus is "very much more common in the British Islands than anywhere else, although prevailing at times, in other countries."

Passing over those portions of the respective definitions, which recount the circumstances and symptoms, that are common to both, and constitute the more ordinary sensible phenomena of continued fever, as the influence of season, climate, crowded apartments, defective ventilation, chills, heat, thirst, state of the pulse, condition of the skin, character of respiration, pain, condition of the sensations and intellectual faculties, muscular strength; secretions and excretions, and others, marking *likeness*, rather than specific difference, we come to the pathological summary, that belongs to each. And, first, of what relates to the blood.

In "*Typhoid* Fever, the blood, when drawn from the body, having its fibrin diminished in a degree, closely corresponding to the gravity of the affection."

In "*Typhus* Fever, the blood being generally of a dark color, often fluid, or grumous; the coagula, when formed, soft and non-fibrinous." Second, eruption, in *Typhoid* "in the course of the second or third weeks of the disease, the skin particularly of the front part of the body being usually, the seat of a peculiar eruption, not commonly abundant, consisting of small circular or oval spots, of a bright rose color, slightly elevated above the surrounding surface and readily disappearing under pressure; coming out successively one after another, for several days; remaining, usually, for somewhat

more than a week, and successively and gradually fading away and finally disappearing." In *Typhus*, "the skin of the body and extremeties being, generally, the seat of an abundant eruption, coming out, in most cases, between the fourth and seventh days of the disease, and declining, at uncertain periods, during the second and third week, consisting of small spots, generally somewhat obscurely defined and irregularly shaped, not unfrequently grouped and confluent; of a dusky, dingy red color, not elevated above the surrounding surface, and disappearing only imperfectly or not at all, on pressure."

Finally, changes of structure, *In Typhoid*, "the bodies of patients exhibiting, on examination, after death, in only a certain proportion of cases, various pathological changes in the brain, heart, lungs, stomach and liver, but in most cases, enlargement or softening, or both of the spleen, and in all cases, thickening or redness, or a marked deposition in the sub-cutaneous cellular tissue, or ulceration, or all these changes of the eliptical plates of the ileum, with enlargement, redness and softening of the mesenteric glands, corresponding,in their position, to the altered intestinal follicles." *In Typhus*, "the bodies of patients exhibiting, on examination, after death, no constant pathological changes of any of the organs; but, in a considerable, though varying proportion of cases, engorgement of the vessels of the brain, with moderate sub-arachnoid serous effusion; engorgement of the posterior portion of the lungs; redness of the mucous membrane of the bronchia; softening or mamellonation of the mucous membrane of the stomach."

Here is opened a rich field for comment, but we forbear, leaving it to the reader to determine how suggestive to his understanding, the word *Typhoid* is, as marking "*the peculiar leison of the disease*," how completely free it is "from the objection of prejudging, by any implication, its nature or character;" how well "it has been ascertained that the disease differs, in *many important particulars*, from the *typhus of British writers*;" and therefore, how "indispensable" it had "become to apply, to it, some other appellation."

We leave it to the reader, also to determine, how unqualifiedly, the disease, "thus characterized and defined, differs essentially from *all others*, *in its causes*, *in its symptoms*," and "*in its lesions*."

In passing, however, we remark that, in every class and variety of diseases, it will be found that minor differences will obtain, as the disease may present in different individuals, in successive seasons and

during different epidemics. But would it be judicious, therefore, to institute and attach a new name to each slight modification as it may arise in practice? If the principal phenomena, those, which constitute the essential characters of the malady, remain intact, notwithstanding a symptom or two, adjunct to those which are pathognomonic, and essential to the perfection of the picture, is wanting, or is but obscurely shadowed in the outline, or though a pathological element not previously noticed, but which, as the figure inherent in the stone, requires the skilful hand of the sculptor to bring it out, perhaps only needed critical search, in a particular direction, to make its existence obvious, or to prove irrefragably that it did not exist, is it not far more consonant with sound logic, to leave it attired in the common every-day dress, with which all are familiar?

In taking leave of this department of Dr. B.'s labors, we are unwilling to deprive ourselves of the sentiments of the learned and clsssical Watson, in reference to the nomenclature of continued fever, as declared in the following:

"We hear, continually, both in and out of the profession, different species of fever spoken of. By the public, typhus fever, brain fever, bilious, putrid, low, nervous. And systematic writers are, to the full, as particular:—mucous fever, ataxic, adynamic, gastro-enteric &c. Now, admitting that fever shows itself, under various forms, I am persuaded that the effect, upon the mind, of all this subdivision, is bad and hurtful. It encourages a disposition, already too prevalent, to prescribe for a disease, according to its *name*. There *is* no line of genuine distinction between continued fevers, that can be relied on. They run insensibly into each other, even the most dissimilar of them, and are traceable, often, to the same" general cause.

We have used the phrase "general cause," instead of the word, contagion, of Dr. Watson, as being, more in accordance, we think, with the accepted doctrines of American practitioners, in regard to the source or sources, whence continued fevers originate. Omitting, for want of space, a comparison of the merits of the different modes of describing fever, as considered on pages 37, and 38, and the reasons, assigned for preferring *one* to the *other*, we remark briefly, that the reader will not fail to notice how completely the author is committed to the method and doctrines of a particular school—how devoted a worshiper he is. at the shrine of a cherished idol.

He will, also, if he seek an entire and therefore a faithful portraiture of this fearful form of disease, question the propriety of adopting

a system, which necessarily excludes from the catalogue of approved authors, such names as Huxham, Pringle, Hillary and others, as well as their labors, which, it must be conceded. have subserved the purposes of science, in all of past time.

Nor will he fail to notice the tribute, the writer, notwithstanding the system of special pleading, to which he is compelled to resort, in order to sustain even apparent consistency, reluctantly pays to the method, thus, perforce, excluded, as declared in what follows. After affirming the general truth that "each has its advantages and its disadvantages, its excellencies and its defects," he remarks, "By the first, a more complete and integral picture of the disease is presented, at once, to the mind, than can be done by the second. We are enabled to see, at a single glance, the form, the outlines, the features, the physiognomy of the disease." Nor is the same tribute less emphatically,—though not so directly announced, when he declares, "The disadvantages of the latter consist in the *absence* of that *wholeness and unity of impression, which are made by the former*," and yet, he chooses to "rely," almost exclusively, upon the last mentioned, as the only one, capable of leading to these results,—"the pointing out of the characteristic features of each of the four great forms of idiopathic fever," the establishing of "a clear and positive diagnosis;" and the ascertaining of "the resemblances and differences, between them." The intelligent reader, will, likewise, be not a little surprised that a writer, who aims at "no other excellence" and who seeks "no higher merit than that" of producing "a methodical and compendious summary of the actual state of our knowledge, upon two most common and most important diseases" should deliberately exclude from such "summary" that portion of the literature of his subject, by which "we are enabled to see, at a glance, the form, the outlines, the features, the physiognomy of the disease." He will be led instinctively, to enquire if this be not a portion, and an important portion, too, of our "*actual knowledge*" concerning idiopathic fevers.

Let us now, consider, briefly, certain symptoms, and also the specific lesions, on which, both the author, and the pathological school, to which he has attached himself, rely, as pathognomonic of typhoid fever,—as the marked characteristics, by which it is to be recognized, and distinguished from typhus.

It will be observed, we use the words typhoid and typhus, as we proceed, in accordance with the language of our author and to avoid

an otherwise tedious repetition of explanations. Having spoken, already, of the more common, sensible manifestations of continued fever, as the condition of the nervous system, the circulation, etc., and expressed our conviction that they indicate *likeness*, rather than *distinctiveness of character*, it cannot be necessary for us to recur to them again, further than by a few brief quotations, to suggest that according to the author's own showing, if they mark difference at all, it must be exceedingly slight,—that, when the whole phenomena are considered, it is rather apparent than real.

In chapter 8th, on the diagnosis of typhus fever; as a preliminary postulate, we read as follows:

"These forms of fever, if we choose, so to consider them, are still so distinctly marked, they differ, in many respects, so constantly and so widely from each other, that their diagnosis is none the less important than it would be, under the other supposition, that they are essentially dissimilar diseases."

Let us examine this point, for a little. By universal consent, scarlatina is considered under three different forms. Now, does any practitioner regard it as imperatively necessary for him to distinguish the one from the other, as from rubiola, variola or erysipelas? So far as prognosis is concerned, and, to considerable extent, treatment, we grant it is important that the medical adviser should know whether it is the milder, or the more grave and dangerous form of the disease, with which he has to contend. Small pox is equally, by common consent, conceded to present under, at least, two principle forms. But does the practitioner's reputation, does science, the welfare of the patient and the protection of society demand as unqualifiedly, that the one or the other should be designated, as the settlement of the simple question, is it small pox? Again, much stress is laid upon the rose colored eruption, as pathognomonic of the typhoid form of fever. Hence we read at page 132, "Almost always, the lenticular eruption will be discovered, if it is timely and carefully sought for." Recurring, also to the chapter on symptoms, we are told, "There is good reason to think that this eruption is almost an invariable accompaniment of typhoid fever;" while on the same page, (63) the writer is compelled to acknowledge that Louis, who sought it, with care, "found it only in twenty-six of thirty-six fatal cases;" and Dr. Hale did not find it in twenty of one hundred and ninety-seven cases. We are further told, in Dr. Jenner's own language, his "impression is,

that the rose spots of typhoid fever, are more frequently absent from patients, more than thirty years old, than from those of less mature age." Must we then, give our adhesion to the confidence, imposed by Dr. B. in a symptom or event, as uncertain as he himself reports the so called *typhoid eruption* to be? A symptom, whose presence or the contrary, according to the "*impression*" of the observing and intelligent Jenner, is less likely to manifest itself at one period of life than another. Much stress is also lain, both in the general remarks, on the diagnosis of typhus fever, and in the summary statement of the differential diagnosis of the two forms, upon alleged *differences* in the cutaneous eruption. But admit, to the full, all that the writer has been able to adduce on the point under discussion, and it may be pertinently inquired if more obvious differences have been shown to exist, than are conceded to obtain in reference to the eruption, in the different forms of scarlatina, or in distinct and confluent shall pox?

Here, it may not be out of place to remark that the most recent investigations concerning the spots, observed in fever, as announced by Dr. Kenedy, in the *Dublin Hospital Gazette*, justify the following conclusions:

"First, that the idea of different poisons, as a cause of the several varieties of rash, does not appear to be borne out by facts.

Second, that the analogies, derived from the study of the exanthemata are opposed to the idea of there being more than one poison.

Third, that red and dark petechiœ may co-exist in the same patient, at the same time.

Fourth, that either may precede the other;—that some members of the same family may exhibit spots—others not; all being sick at the same time.

Fifth, that they may be almost exclusively confined to the abdomen, or to the upper half of the body, or, exhibited in groups, on the pectoral muscles, the front of the larynx, or strictly confined to the knees or elbows.

Sixth, that abdominal lesion may exist with dark petecheæ."

Further, if it be true, as, most unquestionably, it is, that, "in their mode of access, typhoid and typhus fevers, in many instances, very nearly resemble each other; if there be" a pretty close correspondence, in the number, the severity and constancy of the nervous symptoms, in the two diseases, notwithstanding the attempt to institute a distinction, as shown in the following,—"The nervous symptoms, in

typhoid fever almost always creep on more stealthily and gradually than they do in typhus. This is especially true of the dulness and stupor;" is not the conclusion plausible, that differences, sought to be founded on sensible phenomena, are more apparent than real?

But certain anatomical lesions are finally rested upon as an ultimatum in diagnosis.

Hence the author observes, "I have said nothing, thus far, of the lesion of the eliptical plates, as an element in the diagnosis of the fatal cases. It has already been remarked that this lesion is characteristic of this disease; that it is invariably found in the fatal cases of typhoid fever and that it is not found in fatal cases of any other acute disease."

Based upon these positions, we are immediately met with the following deduction:—"If this is absolutely true, without exception and without qualification, the presence or the absence of the lesion ought to be final and decisive, in regard to diagnosis."

Our limits will not permit us to dwell, at length upon this important portion of the discussion. In reference, however, to the unqualified certainty of the positions, thus distinctly enunciated, we remark: if it be true, as declared, on the same page, that Louis, himself, mistook a case of "softening of the central portions of the brain" for one, which, during the life of the patient, he pronounced typhoid fever, (the lesion of the eliptical plates not being found on examination after death); if, an epidemic fever, most of the circumstances, connected with which, 'correspond,'" as Dr. B. admits, "to the phenomena, which we have found to occur in typhus fever," exhibited, in all the cases, in which "antopsies were made, *the intestinal lesions, characteristic of typhoid fever*," and, moreover, if Dr. Lombard, who, "for six years, had been familiar with the latter disease, in France and Switzerland, and, who, in fatal cases, had invariably found the peculiar lesion of Peyer's glands," on examination, post mortem, of the bodies of persons, dead of fever, (both in the city of Glasgow and of Dublin), and, with respect to which he declared "*no doubt could exist as to the presence of follicular disease, found the eliptical plates wholly unaltered*," the reader will be inclined to pause, we think, before he gives his assent to the invariable truthfulness of the positions, quoted above.

Nor will he be less in doubt, with respect to the conclusion of the author, that "*the presence or absence of the lesion ought to be final and*

decisive in regard to diagnosis." The volume consists of four parts, devoted respectively, to the consideration of typhoid, typhus, periodical and yellow fevers. In each part, quite a uniform course is pursued; the several varieties of fever being treated of in twelve different chapters, entitled as follows:—preliminary matters, symptoms, anatomical lesions, causes, varieties and forms, duration, march and complications, mortality and prognosis, diagnosis, theory, treatment, definition and bibliography. As a general summary of the *special doctrines of fever*, as held by the school, of which the writer was an industrious and distinguished member, the work is entitled to respectful consideration, and will amply compensate the medical man of ripe experience, no less than the student and the junior practitioner, for the time and labor, expended in its perusal. In mechanical and artistic execution, it bears the impress of skill and taste. It is cheerfully recommended to all who would revive their recollections of fever. K.

To be found at Raymond & Selleck's, in this city.

A Manual of Examinations upon Anatomy, Physiology, Surgery, Practice of Medicine, Chemistry, Obstetrics, Materia Medica, Pharmacy and Therapeutics. Especially designed for Students of Medicine. To which is added, a Medical Formulary. By J. L. Ludlow, A. M., M. D., &c. A new edition, thoroughly revised and enlarged. With three hundred and seventy illustrations. pp. 816. Philadelphia: Blanchard & Lea, 1857.

Here we have it all—the whole science of Medicine in eight hundred and sixteen pages! What use of elaborate monographs can there be, when the whole matter can be compressed into a single volume? Cast aside your ponderous tomes, save library room and consult the inspissated juice of medical elaborations. "Especially designed for *Students* of medicine." Ah! It is a *dilution* then, designed for *babes* in knowledge? We confess ourselves unable to decide whether this, and kindred works, are *intended* for concentrations or dilutions. Superficial and utterly imperfect, they necessarily are, and can be of no kind of use, except in aiding superficial and unqualified candidates in passing stereotyped examinations. They may be of service to students of this class, while in attendance upon the *grinders* who hang about medical colleges, and, for a consideration,

endeavor to sharpen up dull intellects to the graduating standard of keenness; but of real merit, to recommend them to the genuine student, who seeks after principles, on which to base his answers in passing an examination, they are, and from their nature must necessarily be, utterly destitute. They contemplate, like "French without a Master," a short road to erudition, carefully avoiding the rugged passes by which the real student reaches those principles which constitute his ark of safety in the storms of practical life. Their aim is not the inculcation of principles, but the fixing in the memory an answer to a specific question—a process confessedly occupying the lowest rank in the whole range of mental effort. Knowledge, thus acquired, is limited, and will not stand the test of critical examination; it is evanescent, and vanishes before the signatures on the diploma certifying to its possession are dry. Educators should discountenance their use, and students who are fit to enter the profession should be ashamed to rely upon them.

With regard to the merits of the work before us, it is very creditably illustrated, by very *familiar looking* cuts, which have undoubtedly been in much better company than they now are. They not only illustrate the subject matter of the book, but also the ease of the process, by which books of an inferior order, are produced from the refuse material of standard and high-toned works. Were Blanchard and Lea members of our profession, we could but express the regret, that men who have so largely contributed in bringing out the best specimens of medical literature, should aid in ushering before the world, examples of this kind. They are, however, Publishers, and only *supply the demand;* they have their reward. *Let educators see to it, that the demand is high-toned, and verily they shall have their reward also.* G.

Spirit of the Medical Press.

The American System of Medical Education.—Excellence of plan and faultiness of detail are by no means imcompatible. Some bridges are built, from the necessity of the case, of perishable material; yet so cunningly are they fitted together—without mortice or tenon—that any decayed piece may be taken out and replaced by something better. Like such a bridge, is the American System of Medical Teaching. It is a good bridge, it carries safe over, but we must remove from it the rotten timbers, ere they give way and crush us in the fall.

It requires no uncommon shrewdness to point out the shaky supports in our construction; to provide proper substitutes may call for a wiser forethought and more careful deliberation, as to how and when our reform shall be put in operation.

It is consolatory to notice the fact, that the faults of our system are not inherent, but have their origin in some departure from the simplicity of the original idea. Thus, when the four months' course of lectures was established, it was supposed that the alternation of eight months of reading, with four of public instruction, would afford an agreeable variety to the student, and allow him an opportunity of reversing the ordinary mode of hibernation, by taking his full meal of mental aliment in the winter, and retiring to suck his paws in a quiet office during summer. In furtherance of this idea, it was ordained that a third course of lectures should be unattended by other expense than the marticulation and graduation fees; thus holding out a strong inducement to the tyro to sit at the feet of his Gamaliels three terms, instead of the obligatory two.

But here crept in a departure from the fathers, in the shape of sundry double-barrelled schools,—this happened before the days of revolvers—wherein two courses of lectures were given annually. In these institutions, the student was set up on the benches early in August, and regularly peppered with medical lore six hours daily, until the close of November, when he was turned loose to recover from his headache until March; then subjected to a repetition of the same old lectures from the same solemn professors, until the close of June, when, on some hot summer afternoon, he was discharged with a diploma, just in time to reap the benefits of dysentery and autumnal fevers.

This plan of instruction is still pursued in some rural institutions. Its chief merit is in the abundant opportunity it offers for cheating as to time,

and the convenience it affords for students rejected at some respectable school; permitting them to forget their disgrace, and placing their fortunes in gentler hands, to graduate any how, at the end of four months from the time of their rejection. Aside from these incidental advantages they hold out the inducements of cheapness, and it must not be forgotten that a systematic cramming for eight months in the year supposes remarkable powers of digestion on the part of the student. Another pleasant feature is, that it allows professors to earn more money with less work, and particularly benefits those peripatetic philosophers, who go about doing good and dividing the influence of their names in three or four different schools. where, not unfrequently, they teach three or four different branches.

Satire aside, this system of two terms annually, in which the same lectures are repeated, is hurtful and injurious to the cause of education, and a proper subject for the censures of the profession and the press.

Closely analogous to the double-barrelled colleges are the revolving professors, those men so surcharged with science that no less than three or four professorships, in different schools, can give vent to their erudition. The revolving professor is an animal *sui-generis.* Not unfrequently he teaches different departments in each of his schools; his brain is multilocular, and the different sections of it are closely packed with as many kinds of learning. This nomadic method of teaching is full of serious faults. The influence of the teacher is divided among the various schools in which he has chairs, so as to be nearly neutralized. He is only attached to a school as his pecuniary interest may dictate, and is ready to leave it at any time when it most needs his aid. Throwing aside these considerations of interest, however, it is evident, that he who attempts to give more than one thorough course yearly, attempts too much, especially if he essays more than a single branch.

A scanty professional corps is another fault of some schools. In no form of effort is a division of labor more productive than in medical teaching, and without it the matter taught is bare, compendious, and lifeless, unassociated in the speaker's mind with any effort of his own, or any attempt to attain distinction in a subject of which he knows but little himself. The teacher who is compelled to embrace within his course a large range of subjects, must be a miracle of industry if he would undertake the condensation necessary to teach them well.

Of all the serious faults connected with our system, the worst is the attempt to dispense with clinical teaching. By this time the doctrine should be established, that no school should exist without the advantage of clinical instruction for its students. It seems absurd to argue this question, but it is only a very few years since our national association published in its proceedings an elaborate argument intended to prove that disease

could be taught as well in the lecture room as in the ward. The particular process of reasoning by which this marvellous result was reached does not now recur to me, except that it was proposed to confine the duty of the college to didactic instruction, leaving the student to his private instructor for bedside teaching. We will not stop to discuss such a proposition, for it is to me, and I trust to the readers of the "Review," sufficiently obvious that no school of medicine should be established or maintained where it has not the benefit of the admission of its class to some sufficient hospital. I am aware of the objections raised, of that tender humanity which repeats the old wives' story, that a hospital is designed as a safe refuge for the sick, and not as a theatre for medical display and experiment. I have seen all this and much more similar balderdash repeated during the past month, in a medical journal of considerable pretension to character, but I have no patience with it and no words to express my aversion to so narrow-minded a view.

I take the other ground. I assert that one great good to be derived from a hospital, a good sufficient in itself to induce its foundation, is the opportunity for observing disease collectively, and pointing out to the student its various phases and conditions. I would go further: an obstetric clinic is not in itself objectionable. It *can* be made so offensive and vulgar as to shock the moral sense of the most obtuse, but it *will not* in the hands of the good men who make up the list of our professors of obstetrics. But I can imogine something worse than vulgarity,—a young graduate, without the vaguest knowledge of the practical manipulations of the art, or the etiquette of the lying-in room, in charge of a case of placenta prævia. I know of obstetric clinics where no sense of modesty, however fine, is disturbed, and which still afford to the advanced student abundant means of practical instruction.

I repeat, that where the means of clinical instruction are not available, no medical school should exist, and the attempt to maintain one is a quackery, if to claim to perform that which one cannot do, constitutes the true definition of quackery.

Thus far in my enumeration of evils, I have mentioned only those which are limited to a comparatively small number of schools. Many of our colleges are entirely free from them, and everywhere these evils seem to be on the decrease. But very few schools now hold two courses annually, and some of the older colleges have taken the bold position of refusing to graduate students who thus crowd all their public instruction into a single year. Most of the schools, also, have learned that the itinerant professors are not the most desirable of colleagues; and policy, if not the good of the profession, leads them to insist on single chairs. In others, too, may be noticed enlargement of the faculty, the separation of collateral from the practical branches, as in the creation of distinct chairs of pathology; and

there are but few who now dare to take open ground against the necessity of clinical instruction. That any should do it, is a disgrace to American medicine.

The tendency, then, is toward reformation. But little talk is needed. It is in the power of the better schools to either kill out or reform the inferior order, just as the latter may be possessed of vitality. The noble competitive element in our system is already doing this. Let colleges which possess unusual advantages say so in their circulars, in any manly, straight-forward way; let them use the great engine of modern business, the advertisement; let them consider teaching as a business which ought to pay if honorably conducted, and see to it that no absurd old fogyish notions of dignity interfere with their just claims to consideration. There are a dozen schools whose death is eminently desirable, and any honorable means which will hasten their final departure will do a great public good.

I would that I could stop here, and feel that I had touched on all the faults of our system; I would that those nobler schools which perpetuate the excellencies of the palmy past of American medicine, or those junior institutions ennobled by true science, by energy, and by faithful labor, were beyond and above the reach of the critic. In all of these there is so much that is grand and honest, so much self-sacrifice, so much true zeal for the honor of the profession, that I unwillingly touch on faults which they possess, and which call for remedy. Fortunately for us, these are not errors of the men of the present, but heir-looms of the past, come down to us from primitive days and engrafted in our system in its feeble infancy, when the wisest and the boldest of the fathers were compelled to submit to their inexorable surroundings. I can speak here in kindly tones, for I know that I address noble hearts, which only wait for the proper time and opportunity to beat with one common throb in any enterprise which promises good.

A reform, which will soon be loudly called for, and which is rapidly becoming inevitable, is an extension of collegiate instruction through the year; the distribution of the various branches into regular terms appropriated to them; and the diminution of the importance of the present winter course, by reducing its number of daily lectures to the capacity of the student.

I am aware that this is a broad and almost radical change, and that it involves within itself many questions of the gravest importance. Let me first sketch my ideal of a medical college, and then consider its advantages and the arguments to be brought against it.

1. The establishment of a collegiate year divided into two terms, one of four, and the other of five months. The first course to commence on the first of March, and continue until the first of July; to be followed by a

vacation of two months during the hot season. The second course to begin on the first of September, and hold till the close of January.

2. The same professorships as are now maintained in our best schools.

3. During the year two lectures daily, preceded by recitations. On no account to exceed three lectures on one day, and the third to be a clinical lecture, occurring, say twice a week. Dissections to be continued during all suitable seasons, the time to be at the option of the student.

4. The spring and autumnal course to be dependent on each other. For instance, let Materia Medica, Chemistry, Anatomy, and Physiology, be taught in the spring; and Practice, Pathology, Surgery, Obstetrics and Jurisprudence, in the fall.

Such is a rough sketch of a plan. Its advantages are manifest. The student would commence with the collateral sciences in the spring, and be fitted for the practical departments in the fall of the year. His time would be occupied sufficiently to make his studies a constant occupation, but not so much as to fatigue him beyond endurance, or deprive him of the necessary hours for reading and recreation. The smaller number of branches under consideration at one time, would prevent that strange confusion of ideas which is the misfortune of our present crowded winter courses. Finally, a repetition of three such years would send out well-qualified practitioners, with their knowledge well arranged and practically useful.

To the teacher, other inducements will readily present themselves. It would require no more time than the present plan, while he could more easily adapt his hours to his business convenience, than in the crowd and hurry of the ordinary session, when he is necessarily compelled to yield much to the convenience of his colleagues. Pecuniarily, the number of students being equal and the fees being unchanged, he would receive the same emolument for the same labor.

The difficulties in the way will be found in the competition of money-seeking schools, which will cling to the old system and bid for students on the plea of less time and expense. But let the leading schools of New York and Philadelphia combine on such a plan, and they would soon crush out all opposition. It is hardly to be expected that the movement would be unanimous, but there is much reason to suppose that it would be finally successful. Another and more considerable opposition would arise from the students themselves, or that large class of them who are in search, not of an education, but a diploma. But the prestige attending graduation from such a school would do away with this. The argument is money; and those that have money (I speak here on the supposition that the expenses would be increased, simply by a prolonged city residence), will part with it for the eclat of a thorough education, or for the better motive of the education itself. Those that have no money get through now, with a system nearly as expensive, somehow; and I presume they will do so still.

Let them run in debt, or carry along some temporary occupation. Such must oftener beget success than failure; and it is a peculiarity of poor but high-spirited students that they seek the best advantages.

But supposing that it very largely increased the expense of an education, what would be the general result? Men of energy and character find their way into the profession of law through greater difficulties than those with which we propose to environ the entrance to that of medicine. And others than men of energy and character had better stay out. I am aware that the tendency of the day is to cheapen all forms of education, to throw open every pathway to position and preferment. So far as this applies to that degree of education necessary to teach the poor man his rights and his duties to the body politic, all true men will go with this tendency; but this does not reach beyond a comprehensive and liberal system of common schools.

The further disposition to cheapen and make easy the pathway to the learned professions is a specious theory, which flatters only to destroy. It holds out inducements to the weak and indolent to assume the onerous responsibilities of a path of life beyond their abilities; it does them the greatest wrong that can by any possibility be done any man, by placing them in a false position, when a lifetime must be spent in vain regrets over the youthful vanity and folly which led them from the calm and peace of humbler duties to a struggle for which they are incompetent.

One of the greatest evils of our profession is the lack of recognition of its proper social position, and the low pecuniary estimate placed upon its services at the bedside. Two causes exist for this; one is the ease with which the profession is entered, the hordes which crowd into it attracted by its cheapness, and the competition for "custom," which naturally results. Another is the character of the men who make up its rank and file. It is no use to say that the profession is not properly appreciated. Taken in the mass, it is. The verdict of Moliere has been confirmed by the people, and the voice of an enlightened people is the voice of God, when through centuries it utters one unchanging opinion. The fault is in ourselves, and we alone can remedy it.

I suppose that a temporary result of the scheme here proposed would be a falling off in the number of students, but another and more important result would be an increased respect in the public mind for our art, and an increased emolument to the physician. Let it be carried out fully for a few years, and we should fill the profession with gentlemen, who would command social position, and elevate at once the character and the emolument of the physician. We should shut out the *profanum vulgus*, draw to us men of liberal minds, and place the American profession beyond that of any other nation in the prestige of its true nobility.

Finally, for I have occupied much space, all this can be done, but not at

once; time for the preparation of the public mind is necessary, the schools should be brought to recognize the merits of the plan, and, above all, in our hot haste for reformation, we should beware lest we endanger our present grand old fabric.

The provision of partial summer courses, teaching some of the collateral departments only and conferring no degrees, at once suggests itself as a means, feasible at the present moment and likely to lead eventually to the broad reform I hope to live to see. In the meantime let the censure of the press and the profession fall heavily on all those inefficient schools which fail to meet the present standard of excellence.

To return to the comparison with which I started. We must remove one by one the timbers of our noble structure, replacing them cautiously by better materials; and in the end we shall altogether renovate it, giving it strength, solidity, and permanence; while, in the meantime, the rush of human life shall pass by it uninterrupted and unconscious of a change.—*N. A. Medico-Chirurgical Review.*

Dr. Marshall Hall, of London, who recently laid claim to the discovery of the excito-secretory function of the spinal nerves, and to the application of that term, yields his claim in favor of Dr. Henry F. Campbell, of Augusta, Ga., who, in a pamphlet recently published, demonstrates his priority both as to the discovery of this peculiar function of the spinal nerves, and to the application of the term *excito-secretory.—Med. and Surg. Reporter.*

Editorial and Miscellany.

Medical Education.—This subject, which is one of abiding and intense interest to the true physician and philanthropist, has been invested with additional importance, by having been discussed and referred to a special committee in the National Association, at its late meeting. We therefore deem no apology necessary, for republishing entire, from the *North American Med. Chi. Review*, a somewhat lengthy communication entitled "*The American System of Medical Education*," but on the contrary, earnestly solicit for it an attentive perusal; while, from our identification with the inception and progress of the Medical Department of the University of

Michigan, it will not be inappropriate for us to remark freely upon such portions of the article as bear directly upon reforms which should be effected in this institution.

In perusing the article, the reader will notice that clinical instruction is the first subject of prominent importance, to those interested in the prosperity and usefulness of our State Institution. We fully endorse all that the writer advances on this subject—even the following sentence (with a qualification) :—" I repeat, that where the means of clinical instruction are not available, no medical school should exist, and the attempt to maintain one is a quackery—if to claim to perform that which one cannot do, constitutes the true definition of quackery." Our qualification is this :—The maintenance of a school in such a location is quackery *if accompanied by the pretence of affording perfect medical instruction.* If, however, it is content to rank as a school preparatory to more perfect institutions, it may be honorably maintained without affording means of clinical instruction ; but, if it aspires to a high rank among the schools of our country, it cannot dispense with this all-important feature of a perfect medical school.

The University of Michigan *should* aspire to place its medical department in the foremost rank, and its medical professors have striven to give it such a place. They have felt that such a position of the department was due, not only to the profession, but as an integral part of a University organization,—that it was also due to the body corporate. But they have labored under the disadvantages of a country location, and their most strenuous efforts have succeeded only in placing the department foremost, perhaps, in the list of country schools. They have been embarrassed by the attempt to elevate the standard of acquirement, without possessing the great requisite for success—*increased means of illustration.* Deeply feeling these disadvantages, five of the seven professors have unequivocally expressed themselves in favor of transferring the medical department to this city ; two, have as unequivocally opposed such transfer, mainly, we believe, on account of legal difficulties—certainly not from any want of appreciation of clinical advantages, if we can judge from the language of one of them (the emeritus and clinical professsor), in his introductory lecture to the clinical course. He says :—

" Our meeting here to-day, we trust, will constitute an epoch in

the history of the Medical Department of the University of Michigan. From this humble beginning, we date the commencement of legitimate clinical instruction in the University. And we take pride, on this public occasion, of imputing to the Board of Regents the honor of having taken the first step, by feeble instrumentalities it is true, towards the restoration, in its primitive form, of the Hippocratic method of teaching practical medicine in the United States."

The Board of Regents have endeavored, at once, to avoid the difficulties of transfer, and to supply the deeply-experienced want. The "clinical course" in Detroit, constituting "an auxiliary to the medical department of the University" in Ann Arbor, is the fruit of such endeavor. We mean to speak respectfully, but we must most seriously question the wisdom of this step. We are happy to testify to the zeal, faithfulness and general wisdom of the Board, whose term of office is to expire with the current year. Under its administration, the University has risen from a comparatively obscure, to a prominent position; and, in retiring from office, the Regents may justly claim the reward due to faithful servants. But, though we commend them for general wisdom, we cannot but express the belief, that a desire to pursue the most pacific course, has led them to adopt a plan, utterly inadequate to the demands of the profession, the age and the absolute wants of the Medical Department. The reasons of this inadequateness, we will endeavor to express, in the following brief statement of facts:

First—The plan of clinical instruction adopted—constituting, as it does, a part of the Medical Department—splits that department, locating one portion in Ann Arbor and the other in Detroit, affording an example of divided strength and resulting feebleness. The establishment of a portion of the department, will prove in the end, quite as difficult as the transfer of the whole.

Second—Clinical instruction, according to the plan adopted, is given only during three months of the year—from July to October, —embracing the hottest portion of the year, and subjecting the student to hard labor, when he requires relaxation. So necessary is this relaxation, that nine-tenths of the students will avail themselves of its advantages, in spite of any attractions, which Hospital or College can offer.

Third—The organization is utterly incomplete, both as regards numbers engaged in teaching, and time devoted to the clinical course.

There should be a division of labor, involving at least three clinical branches of instruction, viz:—Surgery, General Medicine and Diseases of Females and Children. The clinical course should be continued for nine months of the year, and candidates for graduation should be required to attend the full course. Any organization which accomplishes less than this will fail to meet the demands of the times and the wants of the students.

In view of the above facts, we unequivocally express our firm conviction, that a city location alone will enable the Medical Department of the University to assume a position of usefulness worthy of its endowment. The legal objections too, are worthless; for, if it was legal to establish a part of the Medical Department away from Ann Arbor, it is clearly legal to transfer the remaining part. That it *is* a part of the Medical Department, is evident from the fact that it is supported from the University Fund, was created and empowered by the Board of Regents, and is open to students on the same terms as the other portion of the Department at Ann Arbor. That it is *regarded* as a part of the Medical Department, we have the authority of the Clinical Professor. He says:—"From this humble beginning, we date the commencement of legitimate clinical instruction *in the University.*" *Clinical instruction in the University* IN DETROIT. If a part of the Medical Department may be here, why not the whole?

Another reform which the writer of the article suggests, and which will undoubtedly be authoritatively called for, by the National Association, consists in a diminished number of daily lectures, and an extension of the lecture period through the year. The first of these has been, since its organization, a distinguishing characteristic of the Medical Department of the University; and at their last meeting, the Board of Regents was memorialized by the Medical Faculty, to extend the period of instruction through the year, making the Medical, co-extensive with the Academic Department. This extension of time, with a city location, where full means of clinical instruction would be available, would enable the Faculty to place the Medical Department in the foremost rank of American Medical Colleges, and the school to offer to the student a *perfect* and *complete* medical education. We earnestly invite the attention of the incoming Regents to these facts, and while we say to the old—Well done, good and faithful servants, we would respectfully suggest to the new Board that much remains for them to accomplish. G.

"Dr. James McClintock.—One of the most painful events which we have ever been called upon to record has reeently occurred in Philadelphia. Dr. James McClintock, formerly a well-known teacher, a few years sinee sold his name to Thomas MeElrath, of the New York Tribune, and Burton, of Burton's Theatre, to be used *ad captandum vulgus* in the sale of a long list of nostrums, of which McClintock furnished the recipes and got $5,000 therefor. The speculation failed. The philanthrapist of the Tribune and the low comedian of the Theatre, sunk $70,000 in the operation, and acquired a valuable experience in quaekery. McClintock was left upon his oars, and finding himself poor, with a damaged reputation, he plays the "repentent sinner," and gets the appointment of Resident Physician-in-Chief, at Blockley Hospital, Philadelphia, a post of honor and profit. To keep up the cant of returning to the fold and making atonement for his errors, he publishes the recipes of his quaek remedies in that very appropriate receptacle. the Philadelphia Medical Journal. He sold those recipes once for $5,000, and it would seem to the ordinarily honest man that this latter proceeding betrays Messrs. McElrath and Burton, as badly as the sale itself betrayed McClintock's honor.

The Assistant Physicians at Blockley, have all resigned—to their honor be it spoken. They have taken a manly course in view of this insult to the profession, this offer of reward to scape-graces.—*Buffalo Med. Journal.*

It is much to be deplored, that there should be a difference of opinion among our cotemporaries, or in the ranks of our profession, respecting the career and just deserts of *Dr. James McClintock.* The above succinct and truthful history of the man is enough to stigmatise his character for life. The penalty therefore for such an act of professional perfidy, should have been a precedent for all time to come, and as sueh, commensurate with the offenee, for which, by the united voice of the whole profession, he has for years, been adjudged *guilty.* The fact that by his attainments, he had once occupied a respectable position as a practitioner, and successful teacher, only serves to aggravate the case, and render him the more obnoxious to deserved censure. To recognize him as a *returned Prodigal*, to serve up the fatted calf, and to clothe him with fine linen, in consideration of apparent repentance, is in our opinion a sad perversion of divine authority—an application of scripture which would be more pertinent and available in an ecclesiastical court than in medical ethics. In this connection we may be permitted to express our surprise, that *Bro. Reese* of the *Gazette* should not have been influenced by the spirit of that creed which has regulated *his* morals, and led him to proclaim the truth to others. Would his tenets admit *a back slider*

into the fold without—nay! do they not *require*—at least six *months probation?*

We would not say one word to deter any unfortunate, erring brother,—who like a "Prodigal" had been starving upon the husks of quackery—from returning to the chartered rights and privileges of his professional Alma Mater. On the contrary, we hold that cases occur in which it should be the pleasureable duty of every member of our profession, when he has seen fruits idicative of repentance, to extend the fraternal hand of fellowship and help to restore a professional exile to his forfeited position. But when thus restored, would it not be reasonable to expect, that he would "choose a lower seat," and be content therewith until asked to come up higher? Does any one believe that if Dr. McClintock had been as successful in his quack speculations, as he had dreamed, or if they had even secured to him an income of $5,000 a year, he would ever have turned his back upon the mountebank, to accept of even this post of honor? We confess that with all reasonable charity for his motives, we should be incredulous. Moreover, what evidence have we that he will not, even now, add the weight of his present position to the scales in which are labelled bottles, and favorite prescriptions that have become the advertised property of empirics? The prestige of a name, purchased for $5,000 was found to be too much damaged by the negotiation; but we want good bonds with competent security, that this re-instatement, does not involve pecuniary re-imbursement, for those who failed to realize on the purchased birth-right.

Whatever may have been the local influences, or motives which prompted honorable members of the profession to lend their aid in securing for him this distinguished position, we have reason to fear that it will excite general distrust and tend to engender local hostilities. If such has been the premium offered to McClintock for his re-generation, may not Brandreth, Ayers, et id omne genus—yet hope to receive from the profession *their* reward? R.

Glycerine is suggested as preservative of vaccine virus. The fresh scab should be triturated with a little glycerine and kept closely corked. It can then be used as required.

Dr. Palmer's Final(!) Conclusions.—" * * * * and now without the slightest feeling of bitterness, or the remotest concern for our reputation on account of anything the editors of the *Independent*, or their co-adjutors may say or do, we dismiss the whole matter, with the hope that no circumstance will induce us to recur to it again.—(*March No. of the Peninsular.*) A. B. P."

" * * * * * we think therefore, we can say that this whole matter respecting the *Medical Independent*, and the conduct of its Editor, so far as our Journal is concerned *is indefinitely postponed.*—(*May No. of the Peninsular.*) A. B. P."

"We still have great confidence in assuring our readers that between this Journal, and the *Independent*, there will be no further unfriendly controversy * * * * * * May we not hope then, that in our columns the cessation of hostilities has come." —(*July No. of the Peninsular.*) A. B. P(?)

How much longer the readers of the *Peninsular* are to be afflicted with these stereotyped assurances and hopeful paragraphs, we dare not predict. But, if we take the above quotations as the data for prognosis, we shall be disappointed if every alternate number of Vol. V., does not contain a *doubtful compliment* for us. We had hoped however that Dr. Palmer would find his small duties as Professor *Proxy* (to the clinical instructor in the University) sufficiently arduous, and to so occupy his mind that he would have no occasion to dig up old bones of contention, which we had once buried. But it is very evident that *nine* "*Medical Neophytes*" are not sufficient to keep a *common* man busy and prevent editorial hostilities.

With regard to his last allusions to the *Junior* Editor of the *Independent*, we are confident that our readers would not consider them worthy of perusal, and, we certainly do not regard them entitled to comment. R.

Marshall Hall and his Ready Method.—The medical world has long admired, in Marshall Hall, the profound physiologist—it is now deeply indebted to him for practical directions, the benefits of which, cannot be calculated with even an approximation to accuracy. So simple and effici-

ent are his rules for establishing artificial respiration, that, when generally understood and practiced, incalculable benefits to human life must result. Already, in asphyxia of the recently born, have we been enabled to test the merits of "the ready method;" and the frequent occurrence of such cases, together with accidents which are liable to attend the practice of bathing in deep waters, so generally prevalent at this season of the year, renders highly important the practical understanding of the correct mode of procedure, not only on the part of physicians, but also on the part of community generally. It is the duty of physicians, when epportunity offers, to teach this method; and editors of the secular press should spread wide the information. In taking this ground, we conceive that we in no way compromise the position we assumed last month, in reference to popular medical teaching; for we now give, as we then expressed it, rules for the public to follow—not theories to speculate upon.

Before laying before our readers these rules, it will not be amiss to allude to the great variety of cases in which they may be put in force. In apnœa of the new-born, by submersion, by strangulation or by inhalation of some of the gases, "the ready method" is the *great and only reliable remedy.* In apnœa, by inhalation of directly poisonous gases, in advanced stages of narcotic poisoning, or from the effects of electricity, it will constitute, at least, a powerful adjuvant to other means. We herewith publish Dr. Hall's instructions, and earnestly request the public press to give them a more extended circulation:

DR. MARSHALL HALL'S INSTUCTIONS.

1. Treat the patient INSTANTLY, ON THE SPOT, IN THE OPEN AIR, EXPOSING the face and chest to the BREEZE (except in severe weather).

I.—To Clear the Throat.

2. Place the patient gently on the face, with one WRIST under the forehead;

[*all fluids and the tongue itself then fall forwards, leaving the entrance into the windpipe* FREE.]

If there be breathing—wait and WATCH; if not, or if it FAIL,—

II.—To Excite Respiration—

3. Turn the patient well and INSTANTLY on his side, and—

4. Excite the nostrils with snuff, or the throat with a feather, &c., and dash cold water on the face previously rubbed warm.

If there be no success, LOSE NOT A MOMENT, but INSTANTLY—

III.—To Imitate Respiration—

5. Replace the patient on his face, RAISING and supporting the chest WELL, on a folded coat or other article of dress.

6. Turn the body very GENTLY ON THE SIDE AND A LITTLE BEYOND, and then BRISKLY on the face, alternately; repeating these measures deliberately, efficiently and perseveringly FIFTEEN times in the minute, occasionally VARYING the SIDE;

[*when the patient reposes on the chest, this cavity is compressed by the weight of the body, and* EXPIRATION *takes place; when he is turned on the side, this pressure is removed, and* INSPIRATION *occurs*].

7. When the PRONE position is resumed, MAKE equable but efficient PRESSURE, with brisk movement, ALONG the back of the CHEST; REMOVING it immediately before rotation on the side;

[*the first measure augments the expiration, the second commences inspiration*].

*** THE RESULT IS—RESPIRATION;—AND, IF NOT TOO LATE,—LIFE!

IV.—TO INDUCE CIRCULATION AND WARMTH—

8. Meantime rub the limbs UPWARDS, with FIRM GRASPING PRESSURE and with ENERGY, using handkerchiefs, &c.

[*by this means, the blood is propelled along the veins towards the heart*].

9. Let the limbs be thus warmed and dried, and then clothed, the bystanders, supplying the requisite garments.

10. AVOID THE CONTINUOUS WARM-BATH, AND THE POSITION ON, OR INCLINED TO, THE BACK.

THE EXCITO-SECRETORY FUNCTION—PRIORITY—A NEW CLAIMANT.—One of our collaborators, Prof. J. ADAMS ALLEN, claims to antedate either Drs. Stewart or Hall in the discovery of the above named function. As he intends to present his claims formally, we venture, upon a long cherished friendship, to make the following extracts from a private letter:

"But of this I am certain, every intelligent student who attended my lectures will be astonished at Dr. Campbell or Dr. Hall claiming as new what was from the year 1848 part of my current teaching."

* * * * * * * *

"I considered it only a necessary corollary from previously well known facts."

IMPORTANT LEGAL DECISION, RELATIVE TO MEMBERSHIP OF AN INCORPORATED MEDICAL SOCIETY—JOHN D. HILL *vs.* THE ERIE CO. MEDICAL SOCIETY.—The Erie County Society derives its corporate powers from the Legislature of New York, by virtue of a general law of 1813. In his decision, Judge Marvin remarks:—

"By the 13th Section, the societies are authorized to make such by-laws and regulations relative to the affairs, concerns, and property of said societies; relative to the admission and expulsion of members; relative to such donations or contributions as a majority of the members at their annual meeting shall think fit and proper; provided that

such by-laws, rules, and regulations be not contrary to, nor inconsistent with, the constitution and laws of this State, &c."

One of the by-laws of the Society fixed a minimum price at which its members might attend, professionally, the County Alms House. Doct. Hill agreed to render professional attendance at a less rate; for this he was expelled. He then brought an action against the Society, by sueing out a Mandamus.

Judge Marvin remarks in reference to this by-law:—

"The regulation was not only unauthorized by the law, but it is in conflict with well settled principles of law. It was the result of a combination to coerce the public authorities of Erie County and the city of Buffalo, to make a certain compensation for certain medical services, not less than a minimum sum fixed. Such a combination is, I have no doubt, unlawful at common law. It is in restraint of the right of the public authorities and the individual members of the society.

It is made the duty of the superintendents of the Poor to appoint a physician for the Poor House. Act of 1851, 532. And yet if the regulation of the Medical Society of Erie County, is to prevail and is to be obeyed by the members of the society, the superintendents of the Poor will not be able to procure the medical services of any one of the members of the society without paying the compensation fixed, and without any regard to the state of health of the County poor, or the amount of services that may be required. A physician entirely competent may be willing to render the services for half the sum fixed in the tariff, and yet if he adhere to the regulation he must decline the appointment. This entire regulation is in conflict with the law of the land and cannot be sustained. It conflicts with the law and its policy, in relation to contracts and trade. The law permits and encourages great freedom in contracts and in trade, and is constantly inviting competition. The skill of the professional man is his capital in trade, and he has a right to employ it for a compensation, satisfactory to him, and thus obtain a livelihood.

* * * * * * *

In conclusion:

1. The regulation in question was unauthorised. 2. It was unreasonable. 3. It was against public policy and the law. 4. The disfranchisement of the relator was unauthorized and illegal.

It follows that he must be restored or recognized as a member of the medical society and permitted without molestation to enjoy all the rights and privileges of a member.

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THE
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Original Communications.

ARTICLE I. *Observations on Peruvian Bark.* By T. R. SPENCE, M. D., Practical Pharmaceutist.

The great value, and superiority, of the salts of Quinia, in the treatment of acute diseases of malarious origin, has tended to withdraw attention somewhat, from the pharmaceutical preparations of Cinchona which represent the several active principles it contains, in their natural state of combination.

When the desired impression is immediate and energetic, as in the interruption of the paroxysms of intermittent fever, quinine is undoubtedly superior to all other forms whatever; but where the object is to prevent the recurrence of fever, or, in the treatment of neuralgia, anemia, or general debility, there are often good reasons for giving preference to some of the preparations alluded to above, and this will be particularly the case, where long continuance of the medicine is desirable, as the functions of the stomach and bowels are in general less deranged than in a similar use of the alkaloid.

The nomenclature of the varieties of Cinchona is governed chiefly by the color, and the name of the district where originally obtained. No classification based on scientific principles, has yet succeeded, although various attempts have been made to accomplish that end.

There are three principle kinds, thus distinguished in com-

merce and recognized by the Pharmacopœa. The yellow, or calisaya, the red, and the pale, or loxa. There are also the Carthagena barks, derived from the more northern ports, of inferior value, but which are sold extensively for the other varieties.

The true calisaya yellow, is produced principally in the Bolivian district of La Paz, and exported usually from the port of Arica, Peru. It occurs in quills and flat pieces of variable size, and has a distinct and characteristic appearance. Quinia exists in greater, and Cinchonia in less proportion, than in any other bark, and with these are associated the other active constituents, quinoidine, cinchonia red, kinic, and tannic acids.

As there can be little doubt, that the salts of quinine are more efficient, than those of cinchonine, there is I think good reason to believe, that this is the best variety that can be obtained. As it is used extensively in the manufacture of quinine, it is in demand for that purpose and extreme care consequently is requisite in purchasing, or a fictitious article may be secured.

The true red bark, is imported in chests from Guayaquill and Lima, and also appears in quills and flat pieces, though usually of less size than the former. It is particularly distinguished by its deep red color, either whole or in powder. Considerable quantities of quinia and cinchonia are found to exist with other principles, and it is a valuable variety, especially for the general purposes of a tonic.

The pale, or loxa, is or was exported from Loxa and Lima, and is supposed to be the first introduced into Europe, there known as crown bark. There is no doubt this was a very superior article, quite equal at least to any since known, and selected with great care for the Spanish market. No reliance however, can now be placed on the pale bark of commerce, being very cheap, and generally inert and worthless. It is sold to a great extent for the yellow, which can only be obtained from commercial sources by adding the term calisaya to it.

From considerable observation, I am convinced that a large proportion of the bark used, consists of this, and other fictitious varieties, often honestly supposed to be genuine, and it is not suprising that confidence has been lost in preparations made from such material.

The officinal forms of Cinchona in general use, are the infusion, decoction, tincture, and compound tincture, (Huxham).

The tincture represents three ounces of bark to one pint, and is a useful addition to other mixtures, but from the entire absence of aromatics, is not so pleasantly administered alone.

The compound tincture has a little more than one and a half ounces to a pint, with the addition of orange peel, Virginia snake root, red saunders and saffron. It is a valuable preparation, having a wide range of application, and is particularly adapted to low and typhoid states of the system.

There have been several proposed ferrated tinctures of bark; the following from Parrish's Practical Pharmacy, constitutes one of the most eligible:

"*Tinct. Cinchon. Ferrat.*

R.	Tinct. Cinch. comp.	four ounces,
	Ferri Citratis,	one drachm,
	Acidi Citrici	fifteen grains.

Triturate the citric acid and citrate of iron together, and dissolve, in the tincture of cinchona.

The dose is a teaspoonful, containing two grains of citrate of iron."

Considerable attention of late, has been given by pharmaceutists, to the fluid extract of bark, and several formulas have been published. I propose the following process, which produces an elegant and efficient preparation.

Fluid Extract of Cinchona.

Take Calisaya Bark, coarsely powdered,—four lbs. avoird.
Dilute Alcohol—eight pints.

Macerate the bark with a portion of the alcohol, in a closed

vessel, kept in a hot water bath for 24 hours. Transfer to a displacing apparatus, pour on the remainder of the menstrum and pass it slowly through twice. Continue the displacement, with dilute alcohol, until completely exhausted, and remove the first quantity (eight pints), when recovered. Evaporate this, by means of a water-bath, to six pints, and the second quantity, in like manner, to four pints, and add together. Allow it to remain quiet for about two days—decant and filter, and dissolve in it

Refined Sugar—four lbs. avoird.

Collect the precipitate of cinchonia red, and resinous matter, and dissolve in it

Alcohol—one pint—

which is to be added to the extract gradually, with agitation. I recover the alcohol used by distillation, which is an important consideration, in an economical point of view, though not at all essential to the process.

It will be readily seen, that the first portion of the tincture must be exceedingly rich, in the soluble principles of the bark, and that the slight amount of heat required in the evaporation, cannot deteriorate it in the least.

The tincture which follows, secures the complete exhaustion, and containing much less of the extractive matter, can be evaporated more safely.

The precipitate of cinchonia red, and resinous matter, which is discarded in most formulas, or only partially incorporated, is of particular importance; and the presence of the small amount of alcohol renders less sugar necessary, for preservation, than would otherwise be the case.

Each fluid-ounce will represent one half an ounce of the crude material (which is the proportion recognized in most of the formulas I have seen); medium dose, one drachm.

The fluid extract is advantageously used, also, in the preparation of the infusions, decoctions,—and in addition to other mixtures.

The following articles I have manufactured for some time,

and they have met with a favorable reception from many :—

Tincture of Calisaya—Aromatic.

R. Calisaya Bark, coarsely powdered,—one lb. avoird.
Ceylon Cinnamon, "
Cardamon Seeds, "
Jamaica Ginger, " of each 1½ drs.
Purest Deodorized Spirits—five pints.

Macerate and displace, and add—

Sherry wine—two pints.
Tincture Angelica—one fluid-drachm.
Simple Syrup—one pint.

Allow it to stand a few days, decant and filter.

Dose—one-half to one table-spoonful.

This is an efficient preparation, and pleasantly taken.

Wine of Peruvian Bark.

R. True Red, or Calisaya Bark, well bruised,—six oz.
Sherry Wine—four pints.

Macerate, displace, and after standing a few days, decant and filter.

Dose—one-half to one wine-glassful.

It may be sweetened to suit the taste, when taken. This was intended as a substitute for the wine and bark so frequently used, and possesses the advantages of elegant appearance, with equal and determinate strength.

164 *Woodward Ave. Detroit.*

ARTICLE II. *Cases Reported to the St. Joseph County (Indiana) Medical Society, at its July Meeting*—1857.

CASE I. *Nasal Polypus.*—Reported by DR. HUMPHREYS.—The following case is reported to illustrate the annoyance that the practitioner is sometimes subjected to, when operations are required which, at first, may seem to be of a trifling character and of easy accomplishment, but, in making the

necessary effort to accomplish which (always sanguine of success), the operator often experiences only defeat and mortification.

August, 1855.—I was called to see Elizabeth P., age between nine and ten, precocious in mind, and of scrofulous diathesis. Found her suffering from polypus of the left nostril, so completely obstructing the nasal cavities upon that side as to prevent breathing through them. The pendant portion of the polypus was even with the opening of the nostril, and cartilaginous in its formation. The blades of the straight polypus forceps were introduced upon opposite sides of the tumor, which was grasped firmly, and by torsion wrenched from its attachments (which latter were fibrous and gelatinous within the cavities of the nose. The hæmorrhage was considerable—but for a moment only. The anterior nostril was free from *visible* obstruction, but no air could be forced through that side of the nose—which afforded conclusive evidence that there were other tumors, high up within its cavities. Ordered—astringent injections up the nostril, and heard nothing from the case until December of the same year, when I was again called to see her. A pyriform tumor was just visible within the posterior naris of the same side, behind the soft palate, the attachment of which became relaxed in damp weather, letting the base of the tumor down so as to press upon the pharynx and soft palate, altering the tone of voice, and causing difficulty, both in respiration and deglutition. An effort was made to grasp the tumor with the curved forceps, but was unsuccessful, the forceps slipping off: the struggles of the patient, the small space in which to open and close the blades of the instrument, and the absence of proper assistants, caused me to desist from further efforts at that time.

January 2nd., 1856.—The patient much the same as when last seen—the os nasi and ala of that side were pressed out of their natural position. The tumor in the anterior nostril had been re-produced, obstructing the nasal passage, so as to preclude ligation of the posterior tumor, as an armed canula could not be passed along the floor of the nostril. With proper as-

sistance at this time, another determined effort was made to grasp the tumor with the curved forceps, and by what surgeons term evulsion—(backward and forward movement) to detach it, the situation of the tumor being such as to prevent torsion. In this as before, the efforts were unsuccessful, except in bringing away a small lobe of the tumor, which was fibrous in structure. Though the patient was brought fully under the influence of chloroform, and the jaws kept sufficiently open by the introduction of cork between them, yet time and again the forceps slipped off, from the difficulty in keeping the blades upon the tumor, which difficulty was greatly increased by the involuntary struggles of the patient. This defeat was exceedingly annoying to me, yet I did not see how it was possible to bring about a different result. Astringent injections were again ordered when the tumor's attachments become relaxed which was always its condition in wet or damp weather, sometimes letting it so far down into the pharynx, as to seriously impede respiration, by pressure upon the Epiglottis; especially was this the case when the patient slept in a recumbent posture, producing a snoring sound like respiration in croup—or stertorous breathing. At times the patient could not lie down at all during the night, for fear of suffocation. Soon after this, the family with whom the patient resided, moved into the country, and I did not see her until April of the present year, when I was sent for to see if "something could not be done to relieve her," I then learned that her condition had been about as described at the last visit, up to the day before the present visit, when, while spending the night at the house of a neighbor, she was seized with a severe paroxysm of coughing while asleep. The friends, upon going to her bed, found the little patient sitting up, breathing easy, the front of her night dress saturated with blood—and unable to articulate intelligibly, from the presence of some foreign substance in her mouth—so filling up its cavity as to prevent motion of the tongue in speaking. The little patient could not open her jaws sufficiently wide to ascertain the contents of the mouth. At this visit I examined her mouth by prying open

her jaws, and found a polypus resting upon the dorsum of the tongue, entirely filling up the cavity of the mouth—the base of the tumor being in contact all around, with the internal sides of the teeth. Some of the attachments of the tumor had doubtless been broken up, and in the paroxysm of coughing induced by the presence of blood in the mouth and throat while asleep, the tumor had been forced from the pharynx up into the mouth. Some effort was made at this time to remove the tumor, but the jaws were opened with difficulty, the ordinary straight polypus forceps, were not of sufficient strength to retain a hold upon the tumor, and the absence of proper assistance induced me to postpone for a few days any further attempts at removing the tumor. The patient during this time subsisted alone upon liquid diet; no solids could be taken into her mouth or masticated. Three days subsequent to this visit, I returned accompanied by a proper assistant, and the patient being secured in an armed chair—the jaws well opened, the tumor was firmly grasped by the blades of the straight lithotomy forceps; the pedicle or attachment of the tumor could not be seen, and the nature and size of it could only be guessed at. After turning the tumor upon the axis of its attachment, some twenty-five or thirty times, I had the unspeakable satisfaction of seeing that which had so often ingloriously defeated me, ejected from its lodgement; every trace of the growth behind the palate and posterior opening of the nose, so far as could be examined, was removed, and no hæmorrhage of consequence followed. The body of the tumor was fibrous—its root ligamentous, about as large as the barrels of two goose quills, and apparently as strong as cat gut. Thirteen days subsequent to this, I removed two fibro-gelatinous polypi from the nostril, since which time no return of the disease has taken place. The patient can breathe freely through the nostril, and is in every way much improved in health.

CASE II. *Fracture and Depression of the Skull—Recovery without an operation.*—Reported by Dr. HUMPHREYS.—*Thursday, December 18th*, 1856, was called at 7 o'clock P.

M., to see Wesley W——, aged 25, of nervo-billious temperament, small stature, by occupation, a well digger and builder of cisterns. Found a fracture and depression of the os frontis—extending over the frontal protuberance of the right side, the temporal ridge, outer third of the supercilliary ridge, and the external angular process. The area of depression measured three, by two and three quarter inches in diameter; depth of depressed bone at the point of greatest depression from normal position, three quarters of an inch: depression almost a perfect concave. The orbitar plate was also depressed—producing pressure upon the eye ball, forcing that organ from its natural position and causing it to protrude a full half inch, accompanied with loss of vision in the eye at the time. The wound of the scalp was but slight, from which blood had flowed freely, but had about ceased at the time of my visit. The patient complained of dull heavy pain in the right side of the head. Pulse 47 per minute and rather full. Respiration somewhat irregular and attended with sighing—inferior extremities cold—surface of the body cool—sensations of chilliness—no aberration of the mind, but full possession of all the mental faculties. The history of the reception of the injury by the patient was this: while engaged at his work (some three miles from town) in digging a well, when at the depth of thirty feet from the surface of the ground, he was struck upon the seat of injury, by three pieces of "well curbing" falling from the top of the well. The "curbing" was of green boards, seven inches wide, and one and one-fourth inches thick, by three feet six inches long. The force of the blow did not take the patient from his feet, or "knock him insensible;" but placing himself immediately in a "slip noose" of rope, he held on to it while he was drawn to the top of the well. After an hour's rest, the patient was placed upon a sled and brought to his residence in town. The only result to be expected in this case was, that after re-action took place, more or less coma would ensue from compression of the brain, and the use of the trephine would become necessary to relieve that organ. A mild anodyne, cold applica-

tions to the head, and warm applications to the extremeties were prescribed for the night, and instructions given to the friends that if any untoward symptoms, other than those then present became manifest, to apprise me of their approach.

Friday morning 19*th*—The patient more comfortable—had slept well the latter part of the night; surface of the body and extremities warm and moist, pulse from 48 to 50, and full—respiration regular—great intolerance of light—the parts about the injured eye much tumified—pain and soreness of the head quite severe, the former not as intense as at the evening visit. Ordered saline cathartics to be given, and repeated until the bowels are freely moved; enjoined strict quiet, light to be excluded from the room—continue cold applications to the head, mild anodynes when needed, diet—"water gruel." Decided not to make any attempt to elevate the depressed bone, without symptoms should arise different from those present. This conclusion was arrived at, from the absence of all the indications for the use of the trephine, as laid down by M. Bourgery, whose directions I believe are pretty generally endorsed by surgeons as correct. *First.* The tissue of bone was not broken up to any considerable extent; *Second.* There were no indications that the dura mater was involved in a penetrating or punctured wound; *Third.* The entire absence of coma, and epileptic symptoms. The treatment of this case, consisted of nothing more than that already stated, keeping the bowels freely opened, cold-water dressings to the seat of injury, enforcing strict quietude in a recumbent posture, and the use of light diet—in fact, an almost "do nothing" treatment.

The patient steadily improved from day to day, and in a little more than two weeks subsequent to the receipt of the injury, was walking about the streets. In a month's time after the occurrence of the accident, he was again at his usual avocation—digging wells &c. Vision is entirely restored to the eye, and that organ has receded in part to its position within the orbit—leaving however the organ of language (phrenologically speaking), much better developed upon that

side, than on the other. The depression at the seat of injury is not now so great as at first, but is yet a full half inch by actual measurement at the most depressed point, from a normal position, and constitutes a marked feature in the appearance of that part of the head—which would be readily noticed by the most casual observer. The subject of this case, occasionally complains of "dull headache," but the attacks are becoming less frequent, as well as less severe; and he is now nearly exempt from any resulting difficulty or inconvenience from the injury. Is it a physiological fact, that in injuries of the head, in proportion as the *animal* predominates over the *mental* organism, in that proportion will be the chances of recovery? If so, my patient is greatly indebted to that feature in his constitution for his rapid convalescence without *positive* surgical aid. The case illustrates very decidedly good results of *conservative* surgery under proper restrictions.

CASE III. *Uterine Polypus—Ligation — Death — Post Mortem appearances.* — Reported by Dr. W. W. BUTTERWORTH. *June 25th*, 1857, I was called to Mrs. M——, a German woman aged 36, and was informed she had been suffering with more or less pelvic uneasiness and frequent hemorrhage for nine years. The sanguineous drain had now reduced her to almost a skeleton. A minute history of the case could not be obtained, from my imperfect knowledge of her language, but am led to infer that she had irregular periods of menstruation most of the time.

An examination per vaginam, revealed a rather hard, round tumor, filling nearly the pelvic cavity, ragged at its apex and undergoing there disorganization. The finger of the right hand passed freely around the tumor as high as could be reached, while the left hand pressed upon the hypogastrum; but no trace of the uterus could be found, nor the extent of the growth be determined. The abdomen was full, even, and hard, as high as the umbilicus. In the left illiac region was a slight tenderness, and to the touch, there was an indistinct appearance of an adventitious growth.

June 30th, 8 A. M.—Pain rather paroxysmal, simulating the first stage of labor. Patient requires catheterism, which is with difficulty performed; clothes wet with a discharge of blood and sanies of a gangrenous smell. At my request Dr. Badger was invited in. The tumor was now driven, in part, out of the genital fissure, the vagina yet full and the position of the uterus still unknown. All the well known diagnostic signs failed us, though we were inclined to the belief that we had a chronic inversion of the uterus to deal with. 2 P. M. There has been severe pains since morning, as her nurse expressed it "like labor pains"—the protrusion from the vulva was much larger. It was now quite surely a polypus making its exit. The os uteri was still not within reach of our explorations, and a part of the heterologe mass seemed yet above the upper strait. Gentle traction was used to release its engagements there, and soon more of the ugly stranger was outside the vulva, a fibro-celular tumor, attached by its pedicle to what was supposed a degenerated cervix. A ligature was applied to the pedicle, and unsuccessful means used to sustain the patients flagging powers. She died twenty hours after the application of the ligature.

AUTOPSY, two hours after death. The tumor was irregularly oblong. Though not measured it was estimated five inches in its antero-posterior diameter; in breadth at its upper part, eight inches, and in its greatest length ten or twelve inches. In growth it was fibrous, largely intermixed with cellular substance. The upper half had probably been arrested in its longitudinal development by the pelvic brim, causing it to spread out laterally. Its weight was six lbs.avoirdupois. The pedicle was large, and attached to the left side or lip of the nearly obliterated os. The uterus was contracted, hard and nodulated, and thrown out from its left external angle was a small pedunculated tumor, from which was again thrown out another, each about the size of an almond.

The forcible extrusion of the polypus, had drawn by its pedicle, the uterus low in the pelvis, with nearly a complete

inversion of the vagina. Our conclusions were, that in the development of this pelvic usurper, the uterus had been pushed above the superior strait, and that a good part of the polypus, though starting within the vagina, was developed above the pelvic brim, and rested on it. Where else could have been its position? One remarkable phenomenon connected with this case, is the expulsive power of the vaganal tissues. The pains were of such a character, as led us to believe that the tumor was intra uterine until after the post mortem. This case is furnished as one of the curiosities of herterologous growths.

CASE IV. *Dysmenorrhœa.*–Reported by Dr. BUCHTEL. During the month of September 1856—I was called on by Mrs. C———, aged 24 of nervo-billious temperament, who informed me that for two years prior to that time she had been a victim of that most painful of female diseases, dysmenorrhœa—that her life during that period had been so embittered by frequent returns of the periods of suffering, as to render its continuance scarcely desirable. Her menstrual periods came on at regular intervals of time, but were always ushered in by chills, cold extremeties, great thirst, and sickness of the stomach. Pains of the back—bowels—sides and loins, most excrutiating—coming on at regular intervals, resembling in intensity, the pains of labor or abortion proper. The menstrual discharge small in quantity, never continuing more than twelve or twenty-four hours—bowels always constipated. In addition to the symptoms enumerated, the case was complicated with severe leucorrhœa pruritus pudendi, partial prolopsus of the uterus, hemorrhoids and general derangement of the glandular and secretory systems. The patient had been under treatment during most of the period of two years, part of the time by reputable physicians, but had received no permanent relief, and scarcely any mitigation of her sufferings. The case was one, in which, but little could be hoped for from any plan of treatment, having in view permanent relief, or even a restoration to "tolerable health." To

regulate the action of the bowels and improve the general secretions—I prescribed pills of

Blue Mass—grains ii.
Extract Hyosci.—grains ii.
Pulv. Ipecac.—grains one-fourth.

Give one pill night and morning until six are taken—after which, tincture of Guaiac. in tea-spoonful doses was given morning, noon and evening, and at the expiration of one week repeated the use of the pills as at the commencement of treatment, increasing the quantity of the tincture of Guaiac. to half a *table* spoonful three times a day. At the expiration of three days the use of the pills was suspended and the following pills given in lieu thereof:

Sulphate of Iron.
Gum Myrrh.
Extract Tarax. aa—grains ii.
Aloes—grain ss.

One and pill morning, noon and evening. This plan of treatment was persevered in for full six weeks—when her general health was so much improved, and suffering at the menstrual period, so much lessened—that the tinct. Guaiac. was suspended, continuing the Iron and Myrrh pills for six weeks longer—resulting in complete restoration to health. The patient was under treatment fully *four* consecutive months, faithfully persevering in the use of the remedies prescribed. At the approach of the menstrual periods, the Iron and Myrrh pills and tinct. Guaiac. were suspended, and large doses of camphor and opium were given, conjoined with the warm bath—and the pretty free use of tea of Polygonum Hydropiper. Between each menstrual period, vaginal injections of acetæte of lead and rain water were freely used. The history and treatment of this case is given, not for any *novelty* connected with it, but to illustrate the good results of a *steady persistent* plan of treatment—by the use of such agents as have an established reputation, exhibited in decided or even in what would be considered by some practitioners *heroic* doses. May not our want of success, often be from absence

of that perseverance so necessary to attainment, in all the pursuits of life? Is it not too often the case, that we change from a given plan of treatment to another, because we have not patience to "bide our time" and wait for the frequent, *slow* effects of remedies?

South Bend, Ind., July, 1857.

ARTICLE III. *Selection from Surgical Notes.* By PROF. GUNN.

Resection of Elbow-joint.—Medication.—Amputation.—Death.—Remarks on the relation which medication bears to disease and cure.

Mr. S. was a resident of one of the interior towns of this State, and the subject of ulceration of the cartilages, and caries of the joint ends of the humurus and ulna, as they enter into the formation of the elbow joint. His general health was not immoderately affected by the disease, but the loathsome and crippled condition of the arm, with the fact that an operation afforded the only means of cure, made him anxious for its performance. Accordingly, on the 23d of January, 1853, the patient being under the influence of chloroform, I resected the joint, removing two and a half inches of humurus, and three and a half of the ulna, leaving the radius intact. It is unnecessary to describe the steps of the operation further than to say that, an incision at the back of the elbow was made, corresponding in shape with the accompanying diagram |——|, the ulnar nerve carefully avoided and the operation completed with reasonable celerity. No ligatures were required. The wound healed kindly at either extremity, and the middle portion, which corresponded with several fistulous openings granulated and assumed a healthy appearance. After the first two days succeeding the operation, oysters, beefsteaks and ale entered generously into his diet, and the patient so far recovered as to leave for home at the end of three weeks. At this time the improvement in the arm and general health was such as to warrant the most sanguine hopes of

a cure; and there is no doubt, that under appropriate treatment such a result would have followed. But anxiety to look after his business, led to exposure, in consequence of which the wound inflamed, and constitutional sympathy was manifested. An irregular, of the herb order was summoned, who administered the ever-present and all-powerful lobelia! Profuse suppuration followed the inflammation, lobelia was continued, and under their coinciding tendencies, the patient gradually lost strength, irritative fever supervened, and on the 30th of the following May I was summoned to the patient, to find the wound nearly re-opened, the head of the radius protruding and covered with granulations. The bones were healthy, and there was simply a profusely suppurating flesh wound, exhausting the patient and attended by irritative fever. This condition had continued for several weeks, and been treated with low diet and medicine! There was now no hope, but in amputation and supporting treatment, and these afforded but little, so much reduced had the patient become. I removed the arm at its middle, and ordered London porter and the extract of beef. The wound healed perfectly, but the patient sank two weeks subsequently to the amputation.

Remarks.—The above case affords a striking illustration of the evil effects of ill-applied and profuse medication. There is not, in my mind, the least doubt that recovery would have followed entire abstinence from medicine, and the continuation of generous diet. The free suppuration which followed the inflamed condition of the wound, was exhausting in its tendency, and called for supporting treatment; it received the reverse; the prostrating effects of the medicine favored the formation of pus, and thus, in addition to its direct tendency, contributed to exhaust the patient. It was a direct and absolute agent for evil. There was no indication for *medicine;* yet how few have the courage to say as much to a patient!

"I felt some hesitancy in putting forth that look." The distinguished author of "New Remedies" spake thus in reference to this work. The reason assigned for this hesitancy

was, that he feared that he was encouraging the disposition manifested by the profession to administer, and the people to take, too much medicine. There is no no doubt as to the fact, there is too much medicine swallowed. There is also no doubt that physicians prescribe too much of the same article, and too little of that which pertains to diet and regimen. They rely too implicitly on the supposed curative properties of medicines.

The reason of the disposition alluded to by Dr. Dunglison, and which he feared he was encouraging, lies in an an altogether mistaken idea of the relation which a medicine bears to a disease, and to the recuperative process. I unhesitatingly make the assertion, that medicine never *cured* disease—that there is no *direct* relation between a medicine and a disease—that there is no mysterious *curative tendency* in any medicine. There is only one curative tendency, and that lies in the organism—it is inate with the being—it is a necessary part of its existence and undoubtedly is the same force which tends to preserve it, and presides over its unceasing changes—it is every where present in organic life—it heals over an abrasion in the plant and closes up a wound in a man—it enables the drooping flower to revive and bloom afresh, and the crowning work of creation to arouse and throw off a syncope. The means of calling this curative force into action are manifold, but a cure is effected *only through its agency.* The most that a medicine can do is to arouse it to action in some instances, and favor its operation in others. There is no direct relation between an inflammation and the lancet, or tart. antim., or verat ver., or cal. and opium; yet any of these agents may not only be useful but absolutely indispensable, by so affecting the system as to favor the operation of this venerable but much ignored "*vis medcatrix naturæ.*" We bleed for acute pleuritis, yet who will say that there is a *direct* relation between the lancet and the disease? A recovery follows, but who will say that the loss of twenty ounces of blood *cured* the inflammation? It simply so *impressed* the system as to favor the curative effort of nature—an effort that will oftentimes be

successful without aid, though at others imperatively requiring it, and failing in its absence. The antagonism between quinine and an ague, would seem to realize a direct relation between a medicine and a disease—in other words, the idea of a specific; but a strong mental emotion may accomplish the same result. An old pioneer in this State suffered for many successive years from an ague, which quinine finally failed to cure. Other remedies, also, were at last powerless, and in spite of all medication, each alternate day brought its paroxysm of chill, fever and perspiration. Pursuing his way along a woodland path one day, his ague surprised him an hour earlier than usual. Hurrying home as fast as his shivering, chattering condition would permit, his progress was suddenly interrupted by the appearance in his path of a huge black bear. For a moment the two stood gazing at each other, the man perfectly paralyzed with fear, after which the bear trotted off, leaving the patient minus the chill, with the sweating stage fully developed, without the intervention of the fever. The disease was effectually broken up, and there was no return of it for several years. What was the relation between a dose of living black bear and the ague? Direct? or indirect? Did it operate as a specific? or, through the *impressibility* of the system?

Within the past few years many undoubted recoveries from pulmonary phthisis have resulted from the free use of oleum jecoris asselli, with and without brandy, and with appropriate regimen. Do such results indicate a *direct* relation between the remedies and the malady? Fat beef, butter and good ale will succeed as often, and the explanation is to be found in the physiology of nutrition, and the pathology of the disease. And in this connection may be expressed the belief, that if the various forms of cancer are ever cured, it will be through influences brought to bear upon the function of nutrition.

Divest medicine of the idea of its *mysterious* relation to disease, and the seductive charm which leads to its continual dministra tion is lost, and much less will be exhibited. When

the object is to restore suspended or impaired functions, or to alter and improve the process of nutrition, by supplying or withholding certain elements, and so ordering the regimen as to derive the greatest possible good from such elements, medication will definite, certain and moderate. If the object is to effect a given result by operating on the *impressibility* of the system, medication will be so conducted as simply to produce a desired effect, leaving to nature the real *curative* work. Too much medicine is administered by continuing its exhibition too long. It is comparatively easy to learn when and how to commence giving medicine, but hard to learn when to leave off—so hard indeed that some men seem never to learn the lesson. There is no course more injurious to the real benefit to be derived from medicine, than the blind and unphilosophical exhibition of remedies *by the clock*. Doses should be repeated, or not, according to the effect produced, and not according to the time which has elapsed. But I forbear, and while I express an abiding faith in remedial measures, confess to a growing dread of hyper-medication.

87 *Shelby Street, June 23d*, 1857.

ARTICLE IV. *The Excito-Secretory System—Dr. H. F. Campbell—Marshall Hall—Alleged Priority of Discovery.* By J. ADAMS ALLEN, A. M., M. D., Formerly Professor of Therap., Mat. Med. and Juris. in the Indiana Medical College; and late Professor of Physiology and Pathology, and acting Prof. of Mat. Med. in the University of Michigan.

It appears from a late number of the London Lancet that M. Hall recognizes to a certain extent the priority of Dr. Campbell. His words are these:

"I arrive at this conclusion: the idea and the *designation* of an excito *secretory* action belongs to Dr. Campbell, but his details are limited to pathology and observation. The elaborate experimental

demonstration of reflex excito-secretory action is the result of the experimental labors of M. Claude Bernard.

"My own claim is of a very different character, and I renounce every other. It consists in the vast *generalization* of excito-secretory action throughout the system.

* * * * * * *

"I trust Dr. Campbell will be satisfied with my adjudication. There is in the excito-secretory function as applied to pathology, an ample field of inquiry for his life's career, and it is indisputably—HIS OWN. He first detected it. gave its designation and saw its vast importance."

M. Hall thus far, freely and fully admits the priority of Dr. Campbell, and the latter gentleman bases his claim upon the date, May, 1850.

I shall undertake to show that this same doctrine was FIRST publicly announced and illustrated in my lectures at the Indiana Medical College in November 1848, and thenceforth continuously during the continuance of my public teaching before the several classes of that College, and also the medical classes of the University of Michigan until my connection with that institution "expired by limitation" in 1854. My own manuscript containing this doctrine was written in May or June 1848.

In proof of this proposition I shall adduce the ancient manuscript which I have fortunately the means of proving as to date, in the most satisfactory manner; and, secondly, the evidence of students then in attendance upon my lectures, and now some of them occupying high professional positions.

As the lapse of years has scattered the various classes throughout different sections of the country, and the addresses of but few are now known to me, I would crave permission to take this mode of inviting all graduates or students of the Indiana Medical College during the session of 1848–9, and 1849-50 to forward me their present P. O. address, that my claims may be fully substantiated by their evidence.

Of this one thing I am fully convinced, that the enunciation of the Excito-Secretory principle as *new*, will fall upon the

ears of such students as have from time to time listened to my lectures, with something like astonishment.

The manuscript itself was never more than a text to extended explanatory remark upon the subject.

I do not claim the nomenclature "Excito-*Secretory*" as invented by me, and shall take occasion in the proper place to remonstrate against the limitation of the great phenomena involved, by this merely arbitrary term. Analogically it is convenient in contradistinction to the term excito-motory, but mere analogy too often leads us into error to be a safe guide, even in nomenclature.

What I do claim—*is the great generalizotion, that the excito influence is followed by a reflex change in which the effect is* NOT A MOTION *but* A MODIFICATION OF VASCULAR AND UNTRIENT ACTION. *That this effect takes place* BY MEANS OF THE DOUBLE NERVOUS ARC. A vast number of therapeutic phenomena are thus explained.

As M. Hall is kind enough to allow Dr. Campbell the credit of having discovered the "excito-secretory function, as applied to pathology," perhaps he may be led to recognize my own claim to the discovery of this principle as applied to *therapeutics.* I shall not be content with this.

In my course upon "General Therapeutics" the subject of "Counter-Irritation" came under review.

After considering the numerous cases wherein nature seems to set up this process in the prevention of disease—or at least where when the external disease subsides, internal derangement quickly supervenes; which, again, is relieved by re-establishment of the external difficulty, (e. g. ulcers upon the legs, *fistula in ano*, otorrhœa, cutaneous eruptions &c., &c.) I passed to consider the issue, seton, moxa, epispastic, &c.

After giving several hypotheses from various sources, of their action therapeutically, and particularly Eberle's view, the lecture proceeds as follows:

"This view," (Eberle's) "of the subject after all, that it is the most plausible one which has been given, is fraught with some difficulties. Why should a blister upon the thorax in

pneumonia be more beneficial than one upon the arm? Or why should an epispastic over the abdomen in enteritis be preferable to one upon the thigh? The parts although nearer together topographically, are anatomically much farther apart. Hence, reasoning anatomically, or from the distribution of the blood vessels, we should be inclined to reverse our application."

"But experience, in this instance, as in many others contravenes analogy, and to its mandates we must succumb. How is the anomaly to be explained?"

"Certainly not by Hunter's 'contiguous sympathy' for this explains nothing: there is no short cut passage between the outer vesicated surface, and the inner inflamed organ—neither by anastomosing vessels nor nerves."

"*Hence the impression MUST BE *transmitted to the nervous centres, and thence reflected to the affected organ, in other words, the influence is primarily exerted upon the cerebro-spinal system, and secondarily upon the internal affected organ.*"

This is the gist of the whole matter, and the point consists in the recognition of reflex cerebro-spinal action which in the instances adduced give rise to a *molecular* or *integral* change in the inflamed tissue—and not a muscular contraction.

In the oral elaboration of this principle was suggested an idea which does not even now appear to have occurred to either M. Hall or Dr. Campbell, viz: *The motor effect is merely* SECONDARY, *and not a necessary part of the action of the nervous arc.*

The molecular or integral composition or decomposition at the distal extremity of the reflex nerve is the real element—the motion, secretion or change of vascular or nutrient action, production or abatement of inflammation or other change of the organ supplied by the nerve (reflex), being altogether *secondary or incidental.*

THE EFFECT IS MOTORY, IF CONTRACTILE FIBRE BE PRESENT!

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* Here is written upon the margin of the manuscript, "*Original Explanation.*"

THE EFFECT IS SECRETORY, IF SECRETING ORGANS BE SUPPLIED!

THE EFFECT IS SENSATION IF SENSITIVE NEURINE BE REACHED!

THE EFFECT IS PERCEPTION, OR INFELLECTION, IF THE ORGAN THEREOF BE IN CONNECTION WITH THE REFLEX NERVE!

I have said that the term excito-secretory is objectionable; the term excito-motory is equally so. The terms "*external* and *internal* diastaltic action," are equally so. Whether internal or external *the modus is the same.*

Heat will melt iron, explode gunpowder, harden clay and destroy or fix colors.

Are these several results indicative of any *diversity* in the force of heat itself? Are they not rather indicative merely of *variety in the bodies acted upon?*

So is it with the excitor force which commands the tiny fibrillæ and cells of the nervous arc. They receive and transmit but the *single impulse*—and in a *single* manner.

The effect produced, then depends upon the STRUCTURE AND CONDITION *of the organ reached.*

The single tubule or firbre of nerve may whilst conducting its peculiar impulse touch, here upon a muscular fibre and call its contractile elements into energetic action, and there upon a cell or group of cells and their growth,maturation and dissolution are hurried on; and so on through the category of vital changes.

But again, this influence *is* NOT *confined to the mere increase of action*, as the term EXCITOR might perhaps suggest.

The reverse may take place—the excitor may rather become the *depressor.*

It would be as correct to say the depressor-motory, the depressor-secretory, as to say the excitor-*idem.*

Physiology, Pathology and Theraupeutics are full of illustrations of this fact.

The excito-secretory function is not in fact distinct from the excito-motory—neither is the depresso-secretory from the depresso-motory.

We might with equal propriety speak of a modification in essence of the electro-galvanic circuit when at one time, by

ingenious mechanism, it is caused to print a telegram, and at another to decompose a mineral—at another to kindle the Drummond light.

The 22d of December, 1845 the Surgical Napoleon of America uttered these words in a lecture which now (as they did then), strike me as prophetic : " We have got to the end of the *vascular* system—and just beginning the *nervous* system."

It is useless to lumber up our already Babel-nomenclature with new and inexpressive barbarisms.

The terms excitor and depressor do not include the functions of the first arm of the nervous arc. Pathologists and therapeutists have been obliged to recognize something more than the mere increase or diminution of action.

Qualitative changes are fully as important, if not more so, than simple *quantitative* ones—and these cannot be properly designated by the terms proposed by Messrs. Hall and Campbell.

There is the recipient segment, the impressible centre, and the reflex conductor, in all the known machinery of the nervous tissue. The resultant effect depends upon the nature of the structure acted upon.

In this view how important is seen to be the material constitution of the parts acted upon !

The *vis nervosa*, or highest relation of force with which we are acquainted, has not to do with intangible things, but requires for its appropriate action the presence of particular material structures, of particular chemical componds or elements, and a certain arrangement.

A clear comprehension of the phenomena of nervous action demonstrates the necessity of something more than shadowy remedies for existing derangements. But of this hereafter—that the limits of the present paper be not too greatly extended

One thought more in connection with the views of M. Hall.

" There is" says he, " perhaps, not a point in the general cutaneous surface in which tetanus—an excito-*motor* effect—may not originate ;

there is scarcely a point in which internal inflammation—an excito-secretory effect—may not be excited."

Turn now to any late treatise upon the physiology of muscular contraction, and we find the doctrine of the inherent "irritability" of the muscular fibre—the nervous system merely calls this into action—as it does any stimulus tending to disturb its integral structure.

The reflected impulse disturbs the molecular structure and contraction results as it would from the application of a chemical agent or mechanical appliance. If continuous, inflammation or even destruction of the tissue may ensue.

Where is the line of demarcation between the two effects; or, rather, is there any such line or real distinction? Correctly speaking all nutrition is but secretion—all secretion is but nutrition. Contraction (and therefore motion) is but an incident in the nutrition or molecular change of muscle.

The nutrition of the liver or of any other glandular organ is precisely identical in its ultimate elements.

The nervous act is in each instance the same.

Where then is the assumed distinction?

It is perhaps safe to assume as probable that parts supplied with cerebro-spinal nerves, exhibit more definiteness in their reflex phenomena than those supplied mainly by fibres from the ganglionic chain. *But it remains to be proved that there is any more real difference between these two classes of nerve fibres, than exists between striated and non-striated muscular fibres.*

For the present I leave the subject by soliciting attention to the real point at issue, which is: that the afferent nerve, the central organ, and the efferent nerve constitute the true system: that the terms "excito-secretory and excito-motory systems" are ill chosen and erroneous as respectively too limited in signification and tending to misapprehension of the real simplicity of the true system which I first publicly pointed out in 1848.

LETTERS IN EVIDENCE OF THE NATURE AND DATE OF MY PUBLIC TEACHING.

(From Robert C. Kedizie, A. M., M. D.)

VERMONTVILLE, Mich. July 29th, 1857.

Dr. J. A. ALLEN.

DEAR SIR:—Your favor of the 23d was received yesterday, and I reply by first mail.

In reply to your inquiry, I would state that I remember distinctly the matter to which you allude. Your reasoning upon the therapeutic action of a blister in pneumonia (also of a blister to the abdomen in enteritis), I remember as distinctly as though I listened to you but yesterday. Your accounting for it by the double nervous arc—analogous to the excito-motory arc, I remember with equal distinctness; though I think yon did not name it then the excito-secretory system.

* * I also remember your rejection of the proposition of "contiguous sympathy."

I could identify your manuscript lectures in any court of justice in the land. It would be impossible for them to be essentially altered and I not detect it.

* * * * * * *

I should have noticed the injustice of Dr. Campbell's claim to priority, but the fact is &c., &c. (Here follow certain personal explanations unnecessary to the present purpose. A.)

Ever Yours Truly, R. C. KEDZIE.

[Dr. Kedzie was a member of the class of 1849 at Laporte, Ia., Medical College—afterwards a graduate of, and Demonstrator of Anatomy in the University of Michigan. Dr. K. had constant access to my manuscripts and took copious notes.]

(From Joseph B. Hull, M. D.)

LANSING, Mich., July 28th, 1857.

DEAR SIR:—I received yours of the 24th yesterday, and am glad of an opportunity of referring to the instructions received whilst I listened to your lectures both at Laporte (Ia. Med. Coll.) in '49 and Ann Arbor in '50. I shall not be under the necessity of referring to notes to refresh my memory upon most subjects treated of by you.

* * * * * * *

In regard to the subject of controversy between Messrs. Hall and Campbell about priority in establishing the doctrine of excito-secretory nervous action—if they cannot date back of 1850, they certainly cannot claim its introduction to the consideration of the profession, as you in your lectures at Laporte in 1849 avowed the principle in treating upon the subject of counter-irritation.

You then rejected the theory of "sympathy of contiguity" and attributed the effects of blisters upon the chest and abdomen in pneumonia and enteritis (as well as near other local inflammations) to the production of an internal change in the vascular and nutrient action similar to the excitor and reflex action of the nervous system, and I think you explained the phenomenon by reference to the double nervous arc. I hope you will succeed in placing the priority of broaching the above principle where it belongs.

Respectfully Yours, J. B. HULL.

[Dr. Hull can also identify the manuscript.]

(From Chas. P. Marsh, M. D.)

HOLLAND, Mich., Aug. 2d, 1857.

DEAR DR.:—In reply to yours of the 23d ult.

I can identify your manuscript lectures as written in the spring and summer of 1848, and first delivered at the session of the Indiana Med. College 1848–9.

I remember distinctly your explanation of the action of counter-irritants by means of the double nervous arc. You rejected the theory of "sympathy of contiguity" and claimed as an original view the principle that their action was analogous to the excito-motory of M. Hall, but that the reflex effect was not a motion but a modification of the nutrition of the internal organ.

You gave many illustrations of this mode of action throughout the entire course.

The same doctrine was also taught by you in the University of Michigan, whilst I attended the sessions of '50 and '51, '51 and '52, both in connection with your lectures upon Thrapeutics and Physiology. * * * * * * *

Yours Cordially, CHARLES P. MARSH.

ARTICLE V. *Gungha, Haschisch, or Cannabis Indica.* By A. G. MERRETT, M. D.

As the uses and actions of the Cannabis Indica (*alias* Gungha, Bung, &c.,) are now being discussed, a few practical observations may not be unacceptable to the readers of the *Independent.*

In general terms, then, it may be said to be a deliriant, and as the profession has lately been favored with a long discourse upon its psychical effects, I would dismiss this part of the subject by remarking that its influence upon the mind is most undesirable, and I may say dangerous—inducing its unhappy victims to perform that peculiar feat, which, in Bengal and other parts of the East, is known by the elegant term, "*running the muck,*" which simply expresses a *penchant mauvaise* to disembowel each and every person the infuriate may meet, until some plucky and charitable fellow commences the devil's tatoo with a club upon the inebriate's head.

Fortunately, however, this notable evil is counter-balanced by the powerful antispasmodic effect ot the drug. By its influence, the agonizing countenance of a tetanic sufferer is relaxed and softened, and this Protean disease (tetanus), in its most aggravated form is made to loosen its Herculean grip. For a period of three years I had an opportunity of watching its administration in cases of tetanus in a Military Hospital in Calcutta. In idiopathic cases, it most frequently resulted in a perfect cure, and although the number of cures in traumatic cases was much smaller, yet enough recovered to vindicate its superiority over every other remedy, and even in the fatal cases, produced such a mitigation of suffering as to justify its systematic and continued administration. Possibly its success may be greater in tropical regions, but we are not wanting in evidence of its value in more temperate ones. Skey, in his "Operative Surgery," mentions, I think, two cases, wherein it was successfully used. It is worthy of remark also, that a tetanic condition begets a very marked tolerance of the remedy, so that doses of from six to ten grains

of the extract every two to four hours were borne without prejudice; nor should it be forgotten that inhalation of the smoke of the cannabis (by means of a dhoudeen) is almost equally efficacious, the advantage of which, when the muscles of deglutition are rebelliously spasmodic (as in the latter stages of tetanus), must be quite obvious. The loss of an incisor tooth for such a purpose, is gladly submitted to.

Its relaxant influence has been brought to bear successfully upon the reduction of hernia by the taxis, and but for the fact that Gunn and others have shown that muscular spasm has little or nothing to do with impeding the reduction of dislocations, one might wish that the cannabis were made a substitute for pulleys and *counter-pulls.*

It would be interesting to experiment with it in cases of strychnine poisoning. Possibly some of your readers may be zealous enough to victimize a canine friend to the cause of suffering humanity.

Article VI. *Amputation at the Ankle Joint.* By B. Barnum, M. D.

On the 6th of May last, I was called by Dr. Beebee, of Vicksburg to operate on a little patient of his, son of W—— S——, whose foot had been accidently amputated by his brother while chopping at the wood pile.

The patient, a boy eight years of age, to protect a piece of wood his brother was cutting, placed his foot under the falling axe, and received the full force of the blow at the anterior articulations of the astragalus and os calcis, performing Chopart's operation, save the flap, and making a complete section of the stocking and boot. The hæmorrhage had not been copious, and though no ligatures were applied, had entirely ceased before I arrived.

Preferring Syme's operation to Peregoff's, I determined to remove the remaining tarsal bones. The patient came easily

under the influence of a mixture of chloroform and sulphuric ether—one part of chloroform to three of the ether.

I carried a transverse incision across the sole of the foot, from the tip of external malleolus to the opposite point on the inner side, and another across the instep, joining the ends of the first incision. The os calcis and astragalas were readily dissected away, and the malleoli removed with a saw. Uniting the flaps with interrupted sutures and adhesive plaster, a light dressing was applied to the stump.

Visited the patient May 15th, one week after the operation. Union, by first intention, had taken place at the sides. A narrow line of sloughing at the anterior edge of the lower flap—discharging freely, and wound looking well.

I saw the case again July 27th. The stump had entirely healed, presenting a firm and beautiful cushion, upon which the weight of the body could be borne without the least inconvenience. The limb is about one inch and a quarter shorter than its fellow, and, with a suitable shoe, will serve an admirable purpose for locomotion, and a living argument in favor of conservative surgery.

Schoolcraft, Aug. 6th, 1857.

Article VII. *A New Apparatus for Dressing Fractured Clavicles.* By J. H. Beech, M. D.

Having to-day received "*The Medical Independent* for July," and observed a notice of a new apparatus for dressing "fractured clavicle," with comments thereupon, I found my controversial propensities aroused, inasmuch as it appears to hold a doctrine, in my opinion, contrary to facts; i. e., that the outer end of a fractured clavicle should always be elevated. From repeated observations of sound persons, I believe that the "sternal end," is as often found highest as the "accromial end."

On reading the article referred to, I took to the street and shops for fresh observations. In a short time twenty-two

adult males were examined from various classes, clergymen, blacksmiths, shoemakers, farmers, butchers, foundry men, etc. Among these the "sternal ends" of the clavicles were found highest in *nine*. One presented a difference of nearly two inches, in a well developed man. The "sternal end" was lowest in *seven* cases. In *five*, the clavicles were perfectly horizontal,—and one could not avoid a kind of *fixy* restraint in which his "accromia" were sometimes slightly elevated and sometimes as much depressed. In females and children, I believe a larger proportion have the outer end lower than the inner. If this is correct, there is no more propriety in elevating, than in depressing the shoulder. Cannot the length of the clavicle be preserved without either? or with either as the normal condition of the case requires? It is useless to preserve the length of measurements if the ends of the fractured bone are forced apart, or if tilted by position or compresses, so as to unite at an angle. Much ingenuity has been expended on the dressings with the materials of "olden time," but the new substances have not been tried in all shapes yet. Allow me to describe an apparatus which I believe is *indicated* and economical, and which will leave the shoulder to be controlled in elevation, or not, as the case may require.

Three pads, and two steel splints or "*artificial clavicles*," constitute the essential parts, made as follows:

A sternal pad having a foundation of iron, presenting a surface as large as the "manubrium sterni," moulded to fit the "incisura semilunaris;" and of sufficient firmness, to have fixed to its outer surface, slides and pivots, screws, or ratchets by which the *artificial clavicles* may be retained at any required length. The fittings should be loose so that nothing but length of "sterno-accromial" measurement should be controlled. This iron foundation should be faced with gutta percha of firm quality, about one-eighth of an inch thick, extending beyond the iron work and securely attached. The inner surface of the pads should be coated with ichthyocolla. Two other (coracoid) pads of the same materials made to fit over the "coracoid processes" and adjacent parts, to wit: an

iron foundation of from twelve to twenty lines diameter, slightly concave, embeded in gutta percha plate a third larger and coated with ichthyocolla as the other. On the convex surface a socket, or pivot to hold the outer end of the *artificial clavicles*, allowing considerable play.

The *artificial clavicles* should be of steel, about the size of the springs of "Hull's trusses," or to "abdominal supporters' according to the size of the patient to be dressed. They should be nearly or quite straight, and notched or perforated to accommodate the fittings on the pads, so as to be governed in length, at the sternal pad independent of each other Several sets of these might accompany each set of pads.

Application — Warm each pad by dry heat until they can be moulded exactly to the inequalities of the individual case; the "sternal" to the "incisura semilunaris," "sterno-costal" articulations, etc., as intimated above. When fitted and partly cooled, moisten the ichthyocolla and apply in proper positions. Adhesive straps may be superadded to render the whole secure if thought necessary. A strap of webbing might be attached to the extreme upper and lower corners of the sternal pad, passing around the shoulder as far back as the middle of the scapula to guard against displacement of this pad. Apply *the splint* on the sound side first, and fasten where the natural length allows. Finally, carry the shoulder of the injured side outward and backward at its natural elevation until the *artificial clavicle* or "splint" corresponds with its fellow, or even a slight distance farther, if thought proper to allow for gliding of tissues, &c. Let this be made fast and the principle indications will be fulfilled. To this may be added in unusual cases, the axillary pad and elbow bandage, or other well known means. This dressing would allow free inspection and treatment to the local injury, as the splints would set nearly an inch from the skin. The patient need not be confined, but wearing a light covering to the shoulders, attend to light business or pleasure. The pads should be cleaned and coated anew with ichthyocolla or other tenaceous material after removal from a discharged case.

Coldwater, July 11*th*, 1857.

Article VIII. *The Medical Plants of Michigan.* By Edward Dorsch, M. D. (Continued.)

The diseases, in which the dulcumara has proved as most beneficial, are incipient affections of the chest, not alone common tuberculosis, but also inflammatory processes.

In the first stages of consumption, if the tubercles are allied with scrophulous diathesis, if the patient feels once in a while stiches through the chest, has a dry spasmodic cough, frequent, irritated pulse, he will find much benefit by a combination of dulcumara, digitalis, island moss, and perhaps acetate of lead. All the nostrums, based upon the narcotic effects of morphine or prussic acid will not produce a more soothing sensation upon the poor sufferer, than this simple plant.

In pleuritis and pneumonia the dulcumara is indicated, when the inflammation has been broken by bleeding, but a dry cough annoys the patient, with little or no expectoration, febrile pulse etc. Senega root, hyosciamus and golden sulphuret of antimony are here the best adjuviantia. A decoction (dr. vj—oz. j. for twenty-four hours), sometimes with small doses of antimonial preparations, will effect almost always a cure in those rheumatic pleuresies, which have a tendency to critical sweats.

Chronic, long neglected catarrhs of the lungs, depending on weakness and laxation of the mucous membranes of the bronchiæ, when ausculation shows more the whistling sound, than rattling of phlegm—("Respiration subsibilante" according to Laennec)—find many times their end by dulcumara and gum ammoniac. In the Policlinicum of Berlin, Prussia, dulcumara is used with great success in whooping cough of delicate children, usually mixed with tartarised potash as the following prescription shows:

R: Extr. Dulcumar.—scruples j.
Kal. tartar. " ij.
solve in
Aq. Fœniculi—ounces iss.
Add Vin. stibiat.—drachms ss.
Syr. Alth. " iij.

M. and S. Every two hours, one tea-spoonful

Diseases of the skin—chronic cutaneous eruptions, indicate often the use of this plant, if they are of herpetic, psoric or syphilitic character, and combined, as we find them many times with scrophula. It aids the healing properties of other anti-herpetic or anti-syphilitic plants, as sarsaparilla and guaiac, and seems to stand in similar relation to the mesentric glands, as taraxacum and conium maculatum stand to the liver. Children laboring under atrophia mesenterica can frequently be saved by its dissolving qualities and the rational use of calomel.

In primary syphilitic affections with phagedaenic ulcerations, dulcumara acts as a purifier of the blood and does a great deal of good; if the patient, smitten with constitutional syphilis, suffers with those "dolores osteocopi," which make the hours before midnight as long as years, and a real hell for the emaciated rake, Murray recommended it in the following formula:

R: Stip. Dulcumar.
Ligu. Sassafras.
Rad. Sarsapar.
Rad. Liquirit.
Rad Gremin. aa—ounces j.
Ligu. Guaiac.—ounces ij.
Sem. Fœnicul.—drachms iij.
Conc. M. and S. Tea.

Two heaped tea spoonsful to be decocted with one quart water down to one pint and a half. Once in three hours a wine glass full.

Pathological secretions from the genitalia, as gonorrhœa and leucorrhœa, offer too, a broad field for efficiency of this drug, which will do half the work of the balsam copaiva, if combined with it.

Another group of diseases, rheumatism, gout, wants the aid of this remedy, if the diaphoresis is suppressed, and abdominal plethora goes hand in hand with languid secretion of the liver and other glands of the abdomen. It proves to be a great help to aconite and antimony.

Great therefore is the sway of the dulcumara and manifold its use. The best way to prescribe it is a decoction of the stems, drachms ij.—drachms iv. for ounces vj. water, or its extract scruples i—drachm ss. per diem. Externally it might be used for warm application on ulcers and impetiginous eruptions.

Finally I may add, that according to my experience, we can hardly find a remedy equally efficient in chronic catarrhus pulmonum, as already mentioned above, with the dulcumara.

(*To be continued.*)

Monroe, August 8th, 1857.

Bibliographical Record.

The Microscope and its Revelations. By WILLIAM B. CARPENTER, M. D., F. R. S., F. G. S., etc., with an appendix—containing the applications of the Microscope to clinical medicine, etc. By Francis Gurney Smith, M. D., &c. Illustrated by four hundred and thirty-four Engravings on wood. Philadelphia: BLANCHARD & LEA, 1856.

The growing interest in the Microscope, particularly in our own country, as a means of improvement and discovery in natural science, of diagnosis in medicine, and of accurate *deduction* in pathological research, gave rise to a demand for such a work as the one before us. Its "revelations" too, the certainty it confers upon scientific investigations, the uses to which it may be advantageously applied in popular instruction, and as a refined and elevating amusement, all add an importance and value to the instrument, beyond what characterizes any other age or period in the world's history. In view of the foregoing considerations, a systematically arranged treatise, on the "*Microscope and its Revelations*," as well as the objects and purposes to which it may be applied, containing definite instructions as to its use, was a desideratum on this side of the Atlantic.

That these several matters might be intelligently set forth, a historical account of the instrument, the modifications and the improvements it has undergone, of what has been accomplished by

its aid, as also a reference to those philosophers who have distinguished themselves, and contributed to the advancement of science thereby, would seem to have been an essential department of the work. To all these the author has devoted an appropriate share of attention. It is a handsome volume of seven hundred and twenty-four pages, and comprising an introduction and twenty chapters, by the author, arranged in such a manner as to present the several topics treated of, in the natural order of sequence, and an appendix, as shown by the title, by Francis Gurney Smith, M. D., the American editor.

Throughout the book, the author speaks both the language of philosophy and experience, and the entire text exhibits evidence that, if it be regarded as a compilation, merely, Dr. C. is sufficiently familiar with all that pertains to the subject, to select what is pertinent, and to present the several subjects of which he treats, in such a manner as to render each, obvious to the comprehension of the reader,—in a word, he speaks the language of a master. Whether he has been as careful to render "honor to all to whom honor is 'justly' due," may be a matter of some doubt. True, in his preface he acknowledges his obligatition to certain respectable writers, and sources of aid, but it is believed others might, with no less propriety, have been mentioned. The paper, typography, binding, and general execution, abating something for defects in many of the illustrations, reflect honor upon the house whence it issued.

But we cannot close our notice of the production, without a word in reference to the introduction and the appendix. Of the former, it is not too much to say, we have seldom had the pleasure of perusing a more finished essay. Whether it be contemplated as a historical summary of the circumstances and events, that have preceded and accompanied each "great advance" in astronomy and chemistry, or any other of the natural sciences; as illustrative of the powers of the microscope, its vast contributions to the aggregate of human knowledge or its modifications and improvements, and the immensity of the field of research to which it is applicable, or as a philosophical commentary upon the fundamental principles of education, and its availability in promoting their development and progress;—in each and every particular it is equally admirable.

In reference to this latter topic, so completely do the reasonings of the writer accord with those in which we have been accustomed to

indulge, that we contemplate them with no common pleasure. Having dwelt at some length on the satisfactions derivable from microscopical investigations, the facility with which they may be made to minister to amusement and the highest intellectual culture, and to the formation of a taste for the beautiful in nature, he observes: "This is no imaginary picture, but one which we have constantly under our eyes, and no argument can be needed to show the value of such a taste, to such, at least, as have set clearly before their minds, the objects at which they should aim in the great work of education. For we have not merely to train the intellectual powers and to develope the moral sense, but to form those tastes—those "likes and dislikes"—which exercise a more abiding and a more cogent influence on the conduct, than either the reason or the mere knowledge of duty. It is our object to foster all the higher aspirations; to keep in check all that is low and degrading."

But our author is not so completely a blind worshiper of the "*Microscope and its Revelations*" even, as not to be aware that much of untruth has been put forth by "microscopic observers;" hence he remarks, "when, as frequently happened, phisiologists began with theorizing on the elementary structure of the body, and allowed themselves to twist their imperfect observations into accordance with their theories, it was not surprising that their accounts of what they professed to have seen, should be extremely discordant." Having, for reasons which he seems to have regarded sufficient, "omitted all reference to the applications of the microscope to pathological inquiry," the American editor has supplied the hiatus by a timely and exceedingly well written appendix, containing a summary record of such "applications," and the important advantages, thus far, resulting therefrom. Herein both the pathologist and the therapeutist will find much valuable aid in regard to diagnosis and the actual character of the diseased action, that presents for investigation and treatment. Many appropriate cautions, will, likewise, be found embodied in this part of the work, in reference to accuracy of observation and deduction, and the hasty announcement of conclusions from insufficient data, as well as with regard to blind and fanatical confidence in microscopical developments, to the exclusion of other long tried and approved methods of diagnosis and pathological research. The writer would not have his readers adopt "the mechanical means necessary for arriving at truths." and repudiate "those

powers of observation and mental processes which enable us to recognize, compare, and arrange the truths, themselves." In illustration he remarks, in the language of another, "you must not suppose that an additional method of gaining information implies abandonment of those, the utility of which, has stood the test of experience. Men must learn the every day use of their senses; must know how to feel, hear, and see, in the same manner as they did before instruments were invented. We don't see the stars less clearly by our naked sight because the telescope is necessary for an astronomer. Neither should a physician observe the symptoms of a disease less accurately because he examined the chest with a stethoscope, nor a surgeon be less dexterous with the knife, because it is only by means of the microscope he can determine, with exactitude, the nature of a tumor."

Considered in the aggregate, Dr. Carpenter's work must be regarded as a valuable contribution to the literature of the age, and no doubt will do much towards the consummation of that most desirable of all events, the general diffusion of scientific truth among men.

To be found at Raymond & Selleck's, in this city. K.

Elements of Pathological Anatomy. By Samuel D. Gross, M. D., Pofessor of Surgery in the Jefferson Medical College, of Philadelphia; and formerly Professor of Pathological Anatomy in the Medical Department of the Cincinnati College. Third Edition—modified and thoroughly revised. Illustrated by three hundred and forty-two Engravings on wood. Philadelphia: Blanchard & Lea, 1857.

In his preface, the author tells us that the "work has been materially modified and fully brought up, in so far, at least, as appertains to what may be considered as really worthy of acceptance, to the existing state of the science of which it treats." "Histology" and "diagnosis" have been omitted, "paragraphs and often whole pages have been re-written"—"new matter has been introduced"—"one hundred and thirty new cuts have been added," etc.

In the "general arrangement," which "remains the same," and which is admirable, about one-fourth of the whole work is devoted to the subject of general pathology. The great importance of this subject, not only to the skilled in morbid anatomy, but also to him who stops far short of accomplishment in this branch, renders accu-

racy of doctrine and clearness of description, qualities, to say the least, highly desirable in a systematic treatise. With a high appreciation of the merits of the work as a whole, and perhaps as great admiration for the author as any one, we feel constrained to say that he has not, in every instance, attained the latter of the above expressed qualities. For instance, in the chapter devoted to suppuration, he fails to say what suppuration is, further than that it "consists in the formation of purulent matter, and constitutes, strictly speaking, merely the third stage of inflammation, inasmuch as pus is never deposited when there is an entire absence of this state." Had he stated in this connection the ideas contained in his remarks on the origin of pus, his instruction would have been more forcible; but even then it would have been defective, for he utterly fails to bring out clearly the relation which pus bears to organizable material, or to state the circumstances, local and constitutional, which favor its formation. We hazzard the belief, that although the chapter is replete with information, a good student may carefully peruse it, and yet fail on examination, accurately to state in what suppuration *really consists.* We must protest, too, against the loose way in which the terms "effusion" and "secretion" of pus are used in connection with the subject of suppuration.

In the chapter on ulceration, our author follows the beaten track, and we cannot permit the present opportunity to pass, without expressing the belief that needless obscurity prevails in teaching this subject. He says:

"Ulceration may be defined to be molecular death of a part, or mortification in miniature, attended with the disintegration and gradual removal of the affected parts. It is synonymous with what was anciently called erosion, and with what some modern pathologists denominate ulcerative absorption. Of the intimate nature of this lesion nothing is known with any certainty, beyond the fact that it is essentially connected with inflammation."

We demur to the first and last of the above statements, viz: That it (ulceration) is "mortification in miniature," and, that "of its intimate nature nothing is known with any certainty." To reverse the order and commence with the last, it *is* known:

First. That ulceration is a destructive process, in which tissues *disappear.*

Second. That this destruction of tissue sometimes takes place *without*

leaving any debris, other than *fluids* which are liberated, and sometimes *even the fluids disappear also.*

Third. That it takes place in *living* tissues, and therefore must be a *vital process.*

It follows then, that it is essentially a process of *destructive absorption;* and that the first proposition, viz: That ulceration is "mortification in miniature," is not true. Mortification may attend ulceration, but constitutes no part of the process, any more than an extensive mortification constitutes a part of the ulcerative process, by which the slough is thrown off. There is such a thing as simple, uncomplicated ulceration; and when it is observed, there is no difficulty in recognizing the nature of the process. The fact that it may be complicated with a gangrenous tendency, or attended by an effort at repair, in which the organizable material furnished, degenerates into pus, should in no way obscure the pathology of the simple process of ulceration. We repeat, that authors are prone to write too obscurely on this subject--we wish we could say this subject only.

To return to the subject of this notice: It gives us pleasure to speak of the book as a whole, in commendatory terms; a work on our part, however, which the reputation established by previous editions, renders entirely supererogatory. It contains a mass of information, conveniently arranged for reference, and fully illustrated.

To be found at the House of Raymond & Selleck, in this city.

G.

Transactions of the Indiana State Medical Society—Eighth Annual Session—May, 1857.

We recognize in this association evidences of sturdy vitality and development, akin to the material energy of its own great State.

There appears to have been a full attendance, and the list of new members is a gratifying proof of professional interest in its well being. We see on its rolls the names of many who have made their mark on the times.

Very few of the various committees appointed at the previous meeting are here ominously labelled—"no report."

Dr. T. J. Cogley reports on Practice of Medicine, and among many valuable suggestions, we note a few:

"If physicians would study medicine more and surgery less, it would result in great good to a large portion of our race; moreover, a man cannot become a good surgeon, without first becoming a skillful physician."

Good, but qualified thus, "medicine more, and surgery *not* less." Dr. C. believes *pertussis* to be dependent on some peculiar affection of the pneumogastric nerve, and recommends:

"A uniform temperature, pure air, liberal nourishment, and above all, sponging the chest several times daily with *cold water;* the inhalation of choloroform greatly lessens the number of paroxysms of cough; belladonna is the best narcotic; nitric acid the best tonic."

In *Rheumatism* he particularly commends alkalies, but does not think they can entirely supersede other remedies. Quinine and capsicum are urged in *pneumonia typhoides.* In *Scarlatina* Dr. C. hits our idea in good part: "Bloodletting, antimonial emetics, strong cathartics, and gruel, are, in my judgement, *complications* rarely recovered from." Of *Typhoid Fever*: "Whenever we attempt to cut short the disease, we do mischief; we can no more cut it short, than we can cut short measels or small pox." Strangely enough, he adds, "alcohol is probably an antidote for the poison in the blood!" Dr. C.'s treatment of typhoid fever, in our opinion, is not to be commended, and it is to be hoped he will revise it. The following is the best *resume* of the treatment of intermittent we have seen:

"It always excites my surprise when I hear of physicians trying to cure *intermittent fever* with anything but quinine; sometimes—not invariably—it is proper enough, in the commencement, to give an emetic, followed, if need be, by a cathartic; but after that, all we want is quinine; from 15 to 20 grs. suffices for a tertian; a quotidian often requires more, and a case of remittent fever an indefinite amount. It is never necessary to wait for an intermission before commencing the quinine; it does not aggravate a paroxysm of fever; it calms, and reduces it; it is not capable, in malarious fever, of acting as a poison; yet there is no benefit derived from giving more than three to six grains." Brief, comprehensive, and, what is better, *true.*

The internal administration of chloroform in half drachm doses every two or three hours, is advised in *delirium tremens*, but its inhalation strongly objected to. In common with most of the enlightened members of the profession at the present time, Dr. Cogley places great

confidence in *the curative resources of Nature*, and observes, *Nature cures diseases*, and not we; the province of the surgeon, or physician, beyond which he cannot step one foot, consists in removing obstacles in her her path. Evidently Dr. Cogley distrusts "perturbation," and has not the fear either of the Fathers or the "Young Men." It is a very creditable paper.

The report on diseases of the Eye and Ear, by Theophilus Parvin, M. D., is demonstrative that the author is up to the times, and contains many valuable suggestions.

Prof. Meeker's report on Fractures and False Joints is characteristic of the man in every respect. Clear, practical, sound, and suggestive, with no effort at display, and rather distinctly intimating that the true cause of "mal practice" suits, not infrequently grows out of the ignorance of the practitioner, as well as the vicious disposition of the patients. He rightly insists upon frequent visits after reducing and dressing injuries, for the plain reason that it is easier to get to place, than to keep in place. We cannot forbear wishing that Dr. Meeker's ripe experience and sound judgment, may yet be put in a more generally accessible form than that of oral lectures, to which he has mainly hitherto confined himself.

Charles Fishback, M. D., reports for the committee on Medical Education. After enumerating the objectionable features of the present system of professional teaching, he suggests practical modifications well worthy the attention of all interested.

1. A Free School.

2. Suitable preliminary qualifications.

3. Not more than three lectures *per diem*, and each preceded by a *real* examination—surgical and other manipulations—by each student.

4. Extension of the term to nine months, and three terms to constitute a course; one third of the last term in each year to be devoted to a review of the entire course in each department.

5. Systematic study out of the lecture room—pharmacological and minor surgery practice—to be insisted on.

6. Clinical practice, either in hospital or private practice, to be seen and participated in, at least, the last year.

7. Certificates to be conferred only by a board of seven, chosen from the ranks of the profession by the State Medical Society.

Here is something tangible, and though unprepared to give it unqualified endorsement, we suggest that the profession "think of

these things." Assuredly, something should be done other than bringing mere railing accusations against some poor sinner against the code of ethics.

The eulogy upon the late Elizur Deming, M. D., of Lafayette, by Dr. Bobbs, of Indianapolis, is a graceful tribute to one of those men in whom all the various elements of true manhood found their place. We have met men in all positions of life, fortune, and fame, but never have we seen another like him upon whom, especially,

"Every god did seem to set his seal,
To give the world assurance of a MAN."

The profound thinker; the accomplished scholar, overflowing with the love of past and present time, and yet in the very profusion of attainment, exhibiting evidences of the power of systematic command over each in detail and all in order; with the imagination exuberant in poetic imagery, but the expression chastened by the most delicate sense of appropriateness and good sense; fluent beyond comparison in language, yet never using a word which the most captious critic would willingly spare; with most exquisite humor and sense of the satirical, and yet never losing a friend by the jest, or leaving a poison in the wound from the arrow of his sarcasm. Of vast and varied professional experience, and yet no closet student could puzzle him with the ingenious speculations of yesterday's lecture-room or journal; no fact of interest or occurrence of important character ever seemed to escape him. Add to these, a commanding person, an eagle eye, and all those social qualities which cement enduring friendships, and such a man was Professor Deming. Had he linked ambition to his faculties, no position, no distinction would have been beyond his attainment. As a professorial colleague, no man was ever imbued with a more catholic spirit. Recognizing the independent working of his own mind, he had not a shadow of fear that wherein his colleagues differed from himself, their opinions were evidences of disrespect toward him. He rejoiced in their personal and professional popularity, and contributed toward it by kindly words and acts. His private correspondence is full of the frankness of confident friendship, and sparkles in every line with the enthusiasm of a genial spirit. Some fifty or sixty letters addressed to the writer of this notice, are, in our opinion, worthy of a place beside the most finished and classic publications of epistolary correspondence. But our thoughts run on too fast and too far upon this theme, we forget

that others who did not know him, may deem our eulogium rather prompted by strong personal partiality, than by correct judgment. We cannot believe this, for we knew the man; though we loved him as a friend, we almost worshipped him as the embodiment of our ideal of the TRUE PHYSICIAN.

The transactions close with the address of the retiring President, Prof. Meeker. The condition of the profession is discussed by a keen observer. We are especially delighted with his remark, which we commend to those whom the coat fits: "From the fact that reformers are themselves too often typical of Satan rebuking sin, reform has become a convertible term with radicalism, anarchy, and licentiousness." The address, as a whole, is sound, sensible, and practical; such a one as we had a right to expect from the author.

The world *does* move, brethren! J. A. A.

Spirit of the Medical Press.

The Case of Huntington.—If there be moral insanity anywhere, it is likely to manifest itself in Wall Street. The wonder is that it should never have been set up as a defense for the various iniquities committed there, until it was interposed in the case of Huntington.

Fortunately, in that case it was interposed unsuccessfully; for to have sustained it would have been to shield undoubted crime, and to stamp the evidence of *non-experts* with a sort of authority that it does not deserve. Even the evidence of experts in insanity is to be received with extreme caution, except in palpable instances, where the tokens of disease are conspicuous, or in cases where the observation of the witnesses has been prolonged and critical.

Huntington was tried for forgery in November, 1856, on one out of twenty-seven indictments for a like offense. And yet it is doubtful, on the admissions of his counsel as to the magnitude of his forgeries, whether such an amazing mass of *true bills* covered half his crimes: and a conviction and sentence following all would have incarcerated an antediluvian for a good part of his natural life.

When the proof on the part of the prosecution was produced, it was of such a character as to leave little doubt of Huntington's guilt, and to insure his conviction. The plea of *moral insanity* was then boldly and unexpect-

edly set up, contrary to his own wishes, and upon the reluctant consent of his family and friends. This is admitted by his counsel. The case was desperate, and it is not to be wondered at that a desperate defense should be urged, rather than none at all.

The plea being pleaded, it was necessary to sustain it by evidence, no less than by boldness and ingenuity; and it is to be regretted that medical men, of professional eminence in a general way, but in no way distinguished as experts, even in questions of general insanity, allowed themselves to be made witnesses on a question the most subtle and equivocal that pertains to that mysterious disease—a question of *moral insanity.*

We do not propose now to treat, in any general and comprehensive method, of *moral insanitg*, but hope to do so in an early succeeding number of this Journal. Meantime we give a brief notice of the case of Huntington; so remarkable for the temerity and pecuniary success of the culprit, and for the audacity, under the circumstances, of this particular defense.

Moral insanity interposed as a shield against criminal allegations should always be fortified by such an array of testimony on the part of *experts* in insanity as will command entire respect. Without intending any reflection upon the general attainments or standing of the medical witnesses in behalf of Huntington, we may be permitted to suggest that neither successful practice in the ordinary routine of medicine and surgery, nor popular and well-deserved reputation in a professorship of surgery, or a medico-legal professorship, constitutes what, in any legal sense, is *expertness in insanity;* and we mean to say, very particularly and decidedly, that *no* expertness is sufficient to detect *moral insanity* on such brief and superficial investigations as were made by the medical witnesses in this case of Huntington.

The testimony adduced by the prosecution was sufficient to make a palpable case of guilt, unless the defense of *insanity* were established. All that we have to do, therefore, is to examine that defense, and see whether it is sustainable on the testimony.

Insanity, in its general aspects, is not a very difficult matter to prove. We have thousands of unquestionable cases of that, as our asylums, and poor-houses, and, we regret to add, even our *prisons* show. Of *moral insanity*, taking the best definitions of the most distinguished experts for a standard, we have not an unquestionable case in a thousand—indeed, none *unquestionable.* There is no indisputable case, unanimously acknowledged by those of the profession who are particularly experienced in insanity. The whole question is in a state rather of agitation than of settlement; and when it is settled, if ever it is, no one can now safely prognosticate

whether *moral* insanity will be recognized as a disease any way distinct from what is known to the law as *insanity* proper.

What, upon the proofs, was the character of Huntington's alleged insanity? He began by being a bad boy—rather worse, perhaps, than most bad boys. He lied, cheated, and "made paper" rather precociously. He failed in business, and helped others to fail in it who might have been successful, unless he had precipitated them to destruction. If he were, by any accident, insane, his insanity was of the *vampyre* sort, for he seemed to gloat upon cemeteries, and speculations upon the disposal of dead bodies. He had a fancy for grave-yards at so much a square foot, embracing Baltimore and Buffalo in the wide range of his sepulchral visions. It bloomed into a fancy for paper, that Wall Street would negotiate at so much a cypher, with some numeral of value prefixed. It matured in all sorts of extravagance, which such easy paper, and an unlimited credit as a successful Wall Street financier would allow him to indulge. Bad in the beginning, he went on to worse, like the ordinary herd of reprobates—those *lunatics* always at large, who wander about the purlieus of great cities, as well as about some of the rural districts, seeking whom they may defraud. Knaves, "confidence-men," and forgers are apt to be insane in that moral way.

Improvidence as to the future for himself and family was deemed a strong mark of insanity in his case. Every gambler, every burglar, and every drunkard is just as insane in that particular. Spendthrifts, too, are always reckless of the future. If they were *morally insane*, extravagance would be no moral crime, any more than it is a *legal* crime. The tokens of insanity exhibited by Huntington were of the sort which distinguishes all reprobates, who, having no means, are willing enough to live, by hook or crook, on the means of other men. There seems to be nothing more in the case than that.

The icdictment was very ably tried by distinguished gentlemen of the bar, and the result is well known. The plea of insanity was not sustained; the culprit was found guilty, and is now serving the State in the prison at Sing Sing, on a sentence of five years' imprisonment.

The justice of the verdict and sentence is apparent from the following considerations:

1. Admitting the actual existence of *moral insanity*, there was no sufficient legal proof of it.

Neither of the medical gentlemen called by the prisoner's counsel was an *expert in insanity*. One was a general practitioner in medicine and surgery, and a professor of surgery, and the other a practicing physician, as well as a professor of obstetrics, diseases of women and children, and of medical jurisprudence. The latter was for two years physician to the New York City Prison, where he saw luuatics almost every day; and

as he was obliged to teach on the subject of insanity, he had, of course, given it attention.

In the eye of the law, neither of these professors was qualified to testify as an *expert in insanity*. Their opinions, as *medical* men, might be deserving of consideration and respect in a general way; so might the opinion of a village doctor, who had never known more of insanity than the single case of his neighborhood offered to his observation. The opinions of doctors are often sworn to before juries; but the weight they have with juries, and more particularly with judges, depends upon the opportunities they have had for critical observation and special knowledge of the subject, rather than upon their general reputation as men, as doctors, or as professors. Expertness means something more than general skill, or the reputation of it; it means the result of great observation and experience, applied, in a somewhat exclusive way, to a particular subject. Dr. Mott is an expert in surgery, and his testimony on a point of surgical practice would doubtless be accepted as that of an expert; in a case of poisoning it might not; perhaps Dr. Chilton's would be more satisfactory. We recollect a case of forgery that was tried a few years since, in which were called as witnesses, persons who had for years been engaged in banks, and in offices connected with the courts of justice; and who had been, in those vocations, under the constant necessity of examining hand-writing and signatures to papers, and who were reputed to be skilled in the comparison of hands, and the detection of forgery. On an appeal of the case, the testimony of these witnesses was rejected by an eminent judge, because they were not deemed to be, in a legal sense, *experts*. There are few men who are experts in all branches of their profession; and, in this country particularly, where every medical man is physician and surgeon, and perhaps professor besides, and every lawyer is both attorney and counselor, expertness, in the strict sense, is hardly to be expected. But we have no space to pursue this point. There are real experts in insanity in this country, as well as abroad, but none were produced to substantiate Huntington's defense, and for that reason it was legally proper that it should fail.

2. Admitting that the medical witnesses were *experts*, they had not sufficient opportunity to examine the accused and decide upon his case as one of *insanity*, particularly of *moral insanity*.

One of the witnesses saw the culprit once only, but then had two interviews with him. They lasted altogether *an hour and a half*, one hour of which was passed in conversation with him. The other witness had two interviews on two several days, the first of *three quarters of an hour*, the other perhaps as long or longer, but the duration of it is not specified.

Now here are three or four hours given to the observation of a case of alleged moral insanity, the demonstrations of which are of the faintest sort, and likely to be simulated, because both the doctors admit that the accus-

ed probably knew who they were, or at least that they were medical men, scanning his conduct. The difficulty of detecting simulated insanity is generally acknowledged by the profession, and there are cases on record where months of close observation have been bestowed by skillful experts, each coming to a different conclusion.

3. But, taking the testimony as it is recorded, there is no sufficient evidence, whether it be considered psychologically, morally, or legally, that Huntington ever was insane. There is abundant evidence, to be sure, that he was a reckless man. But recklessness is not uncommon among those who pride themselves, without much occasion for it, upon their sharpness and shrewdness, and who would scorn—as Huntington had (or assumed) the grace to scorn—a plea of insanity. It is not always easy to account for the schemes and conduct of a villain, because villainy is not the normal state of men, although it may seem to be fast getting so. If it is to be palliated by scientific excuses of moral insanity, or other dubious apologies for misconduct and crime, the period is not far off when each particular offense against social law and order will have its particular form of insanity, real or simulated, presented as a plea to ward off punishment, and when the whole vocabulary of the dead languages will be in requisition to provide a nomenclature adapted to the multifarious iniquities to which men are prone.

We should infer, from the proofs, that Huntington was not a very profound villain,—that his intellect, indeed, was no stronger than his morals. Long practice in his peculiar line of imposition does not seem to have sharpened his wits in respect to the modes of self-protection; but his feeling of security, on the other hand, showed a pretty accurate knowledge of the ways of Wall Street, where barefaced audacity is apt to win confidence in a ratio to its boldness.

We have said that this case of Huntington was ably tried on both sides. On the part of the prosecution particularly (considering the affecting circumstances under which the leading counsel conducted it, oppressed as he was by a severe and most touching family affliction) it was tried with remarkable skill. We speak, of course, with special reference to the cross-examination of the medical and other witnesses on the point of *insanity*, and the summing up on that defense, these particulars being more within our province than the purely *legal* points of the case. Respecting these points, however, we may properly say, that the instructions of the court to the jury appear to conform to the judicial decisions now in force, and to take a position on the point of *moral insanity* which must necessarily be maintained by all courts and juries until a legislative act shall change the existing law—a change which, according to our present convictions, is rather to be deprecated than desired. We confess that we are not disposed to regard that particular plea with great favor, so long as the question it

involves is in dispute among experts in insanity, and especially so long as it may be made a plausible pretext for shielding common wickedness from merited punishment, and a substantial defense against all the crimes in the calendar.

The ability with which the case is reported also deserves notice. Although voluminous, it presents the trial in all its forms of opening, of testimony, of argument, and of determination, as to questions both of law and of fact, with great fullness and detail. To read it is to be present at the trial in every respect but sight and hearing. The value of such reports is inestimable; and although they appear bulky (this being four hundred and fifty octavo pages, in large and small type), yet they enable those who are distant from the actual scene to get a fair view of it, and to judge, perhaps better than the spectators and auditors, of the weight of the testimony and the justice of the decision. That the decision, in this case, was right, is, in our judgment, unquestionable; and we fervently hope that like decisions will always terminate like cases.—*American Journal Insanity.*

Poisoning by Strychnia treated by Inhalation of Chloroform.—Messrs. Editors,—In the Journal for June 4th (page 368), I notice an extract from the *Pharmaceutical Journal*, in which allusion is made to a case of poisoning by *strychnia*. It has been my opinion that the effects of strychnia might be controlled by anæsthetic agents, early resorted to, and so far as a solitary case can prove anything in medicine, the following confirms that opinion.

On the 24th of April, about 12 o'clock in the night, I was hastily called to visit a son of Mr. A. Fairchilds, who, it was stated, had taken poison. On repairing to his residence, situated about one hundred rods distant, I met Dr. F. Goodyear, who had been previously summoned. The patient, a lad aged 15, had been suffering in the evening with toothache; his father designing to give him an *anodyne*, gave a portion of strychnia which he had procured to destroy rats, and had accidentally placed in his wallet, with some powders of sulphate of morphine, similarly put up. The boy retired to an upper room, and very soon became affected with spasms, rose from his bed, made an attempt to reach the door of his apartment, and fell upon the floor, thus alarming the family. Dr. G., who resided near, was immediately called in, and elicited the above facts.

The patient was at the time resting across his father's lap, with countenance suffused and livid, eyes injected and protruding, pulse full and strong, but irregular, surface bathed with perspiration, &c. Violent tetanic spasms were occurring in rapid succession, like the effect of shocks from an electrical battery. Occasionally they would relax for a moment, but the

slightest touch upon the surface, or an attempt to present anything to his mouth, seemed to redouble their violence. No effort had been made to procure emesis, nor did that seem practicable, as deglutition was out of the question, and the violent convulsive movements precluded the possibility of effecting it by mechanical means.

Chloroform was at once administered by inhalation, and freely applied to the spine. The inhalation was somewhat difficult at first, but as he came gradually under its influence the spasms subsided, and in ten minutes he was perfectly quiet. On suspending the remedy the convulsive symptoms returned, but yielded again as it was resumed. Partial anæsthesia was kept up for about four and a half hours, when it was discontinued without any return of the symptoms. No other remedy was used, save an occasional dose of sulphuric ether, with brandy and water. The boy recovered rapidly, complaining for a few days of a slight headache and a feeling, as he expressed it, as though he had been intoxicated.

The poison was put up in a small paper, and, as it was thought a large dose of morphine, it was divided, and one half administered. The remainder weighed nearly *two grains*, which was probably about the quantity given. It had doubtless been administered some thirty or forty minutes before medical aid was obtained. An unusually large amount of chloroform was inhaled, but from the necessarily wasteful manner in which it was applied, we could not determine how much. H. O. JEWETT.

Cortlandville, N. Y., June 10th, 1857.

—[*Boston Med. and Surg. Journal.*

Gymnastics for Paralytics.—Mr. Editor: In one of my former letters I gave a brief account of the success of Dr. J. P. Batchelder, of this city, in restoring strength to the long-enfeebled limbs of a paralytic patient, by persevering efforts at directing the will of the patient to the muscles, aided by passive motion of the parts by the hands of the practitioner himself. The case alluded to was exhibited to the Academy of Medicine last summer, and was that of a young man whom Dr. B. had met accidentally in the street, dragging his slow length along by the aid of stick and crutch, whom he accosted, and found to be a hemiplegic of long standing, but more sound in intellect, and in otherwise good health. In about three months, by a system of muscular training, patiently practised, the integrity of his motive powers (by which I mean both his will and his muscles) were so completely restored that he was enabled to walk upright, briskly and freely, unaided by any extraneous means, and was soon capable of earning his own support.

I have had the pleasure of being an eye witness, during the past two

months, of some most striking instances of the happy results of Dr. Batchelder's system of *Gymnastics for Paralytics*, among the patients of the New York Hospital, some 6 or 8 of whom had been disabled from this cause from one to eight months. In some of these the paralysis was the result of lead poison, in others of apoplexy, in others of blows or other injuries on the head or spine; but in each instance the original disturbing cause had been removed, and the effects only remained—deficient muscular power from long inaction, and enfeebled will, or inability to exert the one upon the other. All the patients of this class were freely given up to Dr. B.'s care, and the ample wards and apparatus of the institution afforded excellent scope for the trial. Dr. B. displays great ingenuity in the contrivance and adaptation of means for straightening the crooked and almost anchylosed joints, and developing the feeble muscles.

The effect of his perseverance has been equally surprising and gratifying. Men who appeared to possess not the slightest power of muscular motion in the affected limbs, in some cases who had been for a long time, and who supposed they always would be bedridden, now, after a few weeks' training, not only get out of bed easily but walk and even run. Lifeless arms are re-animated, and attenuated limbs become plump and strong. One patient especially, who had been an inmate of the hospital since August last, a victim of lead palsy, and who was literally immovable, except by the nurses; whose fingers were crooked and stiffened into the most awkward shapes, and whose feet were so extended, and the ankle-joints so inflexible, that when placed upright by the strength of others, the ends of his toes only could be made to touch the floor—this young man, when I last saw him, was walking about the ward unaided, and was capable of feeding and dressing himself, and expecting soon to return to work for his own maintenance. Such are the results of a little common sense and perseverance infused into reflections upon a trite and every day subject, which the mass of practitioners have been too much accustomed to overlook. The philosophy of this system of gymnastic training, and its applicability to this class of subjects, is very simple and easily understood, but Dr. Batchelder certainly deserves credit for thus arousing attention to it, and for infusing life into the dry bones, both of patients and pactitioners.

I believe it is the intention of the worthy doctor to publish an account of his cases, which I am sure will interest the world, and I therefore refrain from any more detailed description of his modes of procedure.

Next to the infusion into the dark and dormant brain of the idiot, of the faculties of reason and memory, this power of restoring withered limbs approaches most nearly to the marvellous, and forcibly recalls to mind the events recorded in the ninth chapter of Matthew, the third of Mark, and the fifth of Luke.—*Med. and Surg. Reporter.*

Jenner Monument.—The statue of Dr. Jenner has been most successfully cast in bronze. A meeting of the committee will be called in a few days to consider the appropriate site, upon which the character of the pedestal must of course depend. The monument has always been described and intended by the committee to be a tribute from all nations to Jenner, as the benefactor of the whole race of mankind. The subjoined analysis of the subscription list will show how completely this has been carried out:—America, £340 (no return from New York); Sweeden and Norway, £83 10s.; Holland and her colonies, £25; Russia, per Dr. Markus, £241 (this was returned as first list, but the war interfered before anything further was sent); Sardinia, £93; Prussia, £28; Emperor of the French, £20; sundry places abroad, £18 10s; England, £196 (including £25 from Prince Albert. Total £1065.—*Philadelphia Med. and Surg. Journal.*

French Homœopaths in Trouble.—The Cour de Cassation (Supreme Court of Appeal) has just decided that homœpathic practitioners are not at liberty to dispense their globules in localities where a pharmacien is residing. Our readers are aware that no one can legally dispense medicines in France, save the regularly-educated and diplomated pharmacien, who is himself prohibited from practising medicine.—*Philadelphia Med. and Surg. Journal.*

Editorial and Miscellany.

Medical Education.—In our August issue, we laid before our readers a *selection* entitled "*The American System of Medical Education*," and indulged, in our *editorial*, in a train of thought called forth by the wants of the Medical Department of the *State* University. We propose now, to continue the subject, by pointing out some of the reforms, which are generally needed in the Medical Schools of the United States—or, to adopt the figure contained in the above-named article, to point out the shaky timbers in that grand old bridge—American Medical Education. Fully agreeing with the writer of the article, that the changes in this structure must be gradual, we propose to direct attention only to the most defective pieces—those which, if not replaced by better material, endanger

the safety of the whole structure, and the precipitation of the passing student into the foaming and filthy pool of quackish ignorance below.

First—The point which principally requires the attention of the committe (of inspection) appointed by the National Association, is either the entire absence or extremely shaky condition of the timber —*clinical teaching.* It is absent in some instances, too small, too short, too rotten and frail in others—*perfect in none.* The place which it occupies in the structure is too unimportant. It should be of sufficient length to span the last chasm over which the novitiate passes to enter upon, and assume the life-important responsibilities of professional practice; and it should constitute the grand supporting arch of this portion of the structure.

To drop the figure, clinical instruction is undoubtedly the greatest present want of the American Medical Student. It is simply absurd, to talk of making even moderately qualified *practitioners* of medicine, without observation at the bedside. It is *cruel* to permit that observation to be made, for the first time, *after* the student has passed from under the guidance of his instructors. Community have a right to demand legal *protection* in this respect; and shall it be said of the medical profession, that it sets itself against the reform of an evil of this magnitude? This cannot be said—for the great body of medical freemen is unanimous in its favor. A few country schools (and, to the honor of the profession, but very few) assume to doubt the feasibility of affording clinical advantages for *all.* But even their doubts acknowledge its importance; and, in regard to practicability, let the National Association call for the measure, and let the leading city schools extend, amplify and perfect their arrangements for clinical teaching, and assumed doubts must vanish and opposition cease. Professional sentiment on this snbject is *right* and cannot be too imperative.

We have plainly intimated, that sufficient attention was not given to this branch of instruction, even in those schools which possessed the necessary advantages. This statement is but too true, and upon it are based the attempts at argument of the few who assume to doubt the practicability of general hospital instruction. But imperfectly, as in many instances, hospital instruction is carried out, its advantages are such as can be supplied by no other means. Imperfect as it is, it affords an argument only in favor of amplification. Let the present plan of hospital instruction be elaborated, and let one

year's attendance thereupon be one of the requisites for graduation. Let no candidate for the Doctor's degree be admitted to an examination until he has complied with this requisition. A tithe of the advantages to be derived from medical charities, are not yet realized by the hospitals of this country. Let hospital attendance become a *requisite* for graduation, and an adequate plan of hospital instruction will be elaborated to meet the requisition.

Second—Lecture terms must be increased in length. Ours is a progressive and accumulating science. The amount of instruction to be imparted is constantly increasing; and the idea of giving a complete course on surgery, or practice of medicine, in one hundred lectures, *cannot be realized.* This too, is true of several other branches, grouped together under the professorial titles adopted in our colleges. If four months were required when the present college system was adopted, twelve are not more than sufficient now. Three-fourths of that period, at least, should be adopted as the lecture term.

Third—Increased term of pupilage is another reform, in which both community and profession are deeply interested. The same reasons which we have advanced for extension of the lecture term, apply to this proposition also. There is too much comprised in a complete medical education to be acquired by ordinary men, in less than four years. Every educated medical man feels the truth and force of this position.

We cease here. We have pointed out those which appear to us the three frailest timbers in the structure—clinical instruction, length of term, and period of pupilage. Let them be replaced by material of the highest order, perfect in adaptation and adjustment; and, timber by timber, let us inspect, from our different stand-points, the whole structure—so shall renovation be gradual, effective and harmonious. G.

Ligature of the Common Carotid.—The last number of the New York Journal of Medicine, contains a very elaborate and interesting article upon "*The Early History of Ligature of the Common Carotid Artery*" with a report of the operations in the city of New York, by James R. Wood, M. D., Surgeon to Bellevue Hospital. From it we glean the following facts and conclusions:

The *first* operation of this kind on record, is to be found in a Ger-

man translation of Bell's Surgery, in which case it was performed on account of an accidental wound of the Artery, in the removal of a scirrhous tumor, respecting which, however, no date is given.

The first *authentic* case, recorded is that of Mr. Fleming—an English Naval Surgeon occurring in 1803, and was reported in the "*Med. Chi. Journal*," for January 1817.

The second authentic case, and the *first operation of the kind in this country, in which the Artery was tied for the extirpation of a tumor*, was that of Dr. Cogswell—Hartford, Ct., and occurred only eighteen days subsequent to the *first recorded* case by Fleming.

The first recorded case *for Aneurism*, was by Astley Cooper; the *second* by Dr. Amos Twitchell *of our own country*—(Keene, N. H.) The first *successful* operation of the kind, for Aneurism, in this country was that of Dr. Wright Post of New York City, and was performed January 9th, 1813.

The following table exhibits the number of these operations in New York City, by whom and for what, they were performed:

	NO. OF OPERATIONS.
Jas. R. Wood, M. D., Surgeon to Bellevue Hospital	9
Valentine Mott, M. D.	44
Gurdon Buck, M. D., Surgeon to the N. Y. Hospital	4
John Watson, M. D., " " " "	1
A. C. Post, M. D., Professor of Surgery in the Univ. Med. College	1
W. Parker, M. D. " " " Coll. Phys. and Surg's.	9
J. P. Bachelder, M. D.,	1
Wm. H. Van Buren, M. D., Prof. of Anat. in Univ. Medical College	5
W. Detmold, M. D.,	5
T. M. Halstead, M. D.,	1
D. Meredith Reese, M. D.,	2
Chas. E. Isaacs, M. D., Demonstrator Anat. Univ. Med. College	1
Isaack Green, M. D., Late Surgeon to Bellevue Hospital	1
A. B. Mott, M. D., Surgeon to St. Vincent Hospital	4
J. S. Thebaud, M. D.,	1
W. R. Donaghe, M. D., Surgeon to Dewitt Dispensary	1
Geo. T. Woodward, M. D.,	1
Stephen Smith, M. D., Surgeon to Bellevue Hospital	1
	92

Summary.—The common carotid was ligatured for the following causes:—

Hæmorrhage—Whole number nine, of which six recovered and three died.

Malignant Disease of Head or Face—Whole number seventeen, of which four resulted in the apparent cures of the original disease; ten were decidedly benefitted, growth of tumor being for a time arrested; two died; one not noted.

Aneurism by Anastomosis—Whole number ten; of which four were cured; five were benefitted; one died.

Aneurism of Branches of Carotid—Whole number four; all recovered.

Epilepsy—Whole number two; both benefitted but not cured.

Removal of Tumor—Whole number seven; all recovered.

Secondary Hœmorrhage occurred in five instances; slightly in two, and severely in three; all recovered, the hæmorrhage being controlled by pressure.

Date of Separation of Ligature was noted in twenty-four cases—maximum period, thirty-one days; minimum, nine days, average fourteen days and twenty-one twenty-fourths.

The article, as a whole, is a complete historic compend of this branch of surgery in New York city, and among the ablest contributions to this department of medical literature. R.

Excito-Secretory.—Dr. Allen formally presents his claims of priority, in this number of the *Independent.* It is very evident that Dr. A. recognized and taught this principle as early as 1848, and to those who know the man, his attainments and habits of thought, this early recognition will be no matter of surprise. To us, the independent discovery of this principle by Dr. Allen in the north-west, by Dr. Campbell in the south-east, and by Marshall Hall in England, illustrates the fact, that in the advance of science men are naturally led on to definite results—that based upon identical or similar facts, correct rersoning will reach identical or similar conclusions. It is none the less to Dr. Allen's credit that Dr. Campbell first recorded his observatious in printer's ink—it is none the less to Dr. Campbell's credit that Dr. Allen two years previously publicly taught the same ideas. It will be observed that Dr. Allen carries his generalization much farther than either Dr. Campbell or Hall, and criticises the terms excito-motory and secretory. The article is one of great merit, independent of the claim made. G.

Clinical Advantages.—The following is a quotation from a private letter, which was elicited by our remarks on Medical Education in the August number. It is a practical illustration:

"Your remarks on Medical Education must meet with approbation from every student of medicine who has commenced practice without seeing the rules given him practically applied in the treatment of disease, and in obstetrics. I draw this conclusion from my own experience."

"My first obstetrical practice was in a case of placenta previa, with breech presentation; the labor was protracted, and I would gladly have given my hat, boots, diploma—anything, even to the nether garment, to have known at times what to have done. The woman speedily recovered, thanks to God, and not to my judicious management."

"I have since applied myself closely to my profession, and think I am a little better prepared to enter a sick room, than when I left the University, a 'full fledged Doctor!'"

The author of the article which we republished last month, says, in reference to an obstetric clinic:

"But I can imagine something worse than vulgarity—a young graduate, without the vaguest knowledge of the practical manipulations of the art, or the etiquette of the lying-in room, in charge of a case of placenta previa. I know of obstetric clinics where no sense of modesty, however fine, is disturbed, and which still afford to the advanced student abundant means of practical instruction."

CORRESPONDENCE.

Editors of Medical Independent:

I find in the July number of the *Independent* an article from your collaborator, A. G. Merrett, M. D., criticising the report of a case of cranial fracture, furnished by me for the May number of your journal. I should, perhaps, have let the article pass without comment, receiving it in the same friendly spirit in which it was proffered, had it not received editorial indorsement, accompanied by the opinion that the symptoms in the case referred to, "contraindicated an operation."

As to the question whether "anæsthesia is indicated in cases of

compression *generally*," I leave it to be answered by Dr. M. The report does not claim it. It simply states the fact that it was resorted to in a particular case, and so far as its effects were apparent, they were manifested in an increase of vital action (as indicated by the improved circulation), instead of "further crippling the recuperative powers."

Perhaps the profession will not be slow to understand—though the Dr. cannot "conceive," how sensibility may remain when consciousness is suspended. I find a case reported in the July number of the American Journal, by Dr. Packard of Philadelphia, in which, as in the case reported by me, "Anæsthesia" was *not* "the result of compression," and the same "acute sensibility" remained, and the patient was etherized for the purpose of trephining.

Dr. Gunn, says, "at present surgeons are guided in reference to this question," (fracture of the cranium*) "by symptoms of compression. If there is *compression* of the brain, the operation is imperatively demanded." The symptoms given in the case reported by me, were, "extremities cold, respiration slow and imperfect, pulse about fifty, and intermittent."† These taken in connection with a severe injury of the head, with a portion of its walls *depressed*, I thought indicated compression of the brain, and accordingly operated. Prof. Gunn thinks they indicated "*concussion* not *compression*."

JNO. AVERY, M. D., *Otisco, Mich.*

London, (Eng.) July 16, 1857.

It may perhaps be a source of satisfaction to some of your subscribers who are lamenting the distressingly healthy condition of the Wolverines, to know that providential design or sanitary reform, or both combined, have made many of their professional confreres in

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* The question is, *elevation of the depressed bone*—not fracture of the cranium.—Ed.

[†Add to these, "symptoms of prostration so urgent that an operation was not deemed advisable until reaction in some degree could be established"—together with the "patient extremely sensitive to the slightest touch of the wound," and we have an array of symptoms strongly expressive of *predominating concussion*. We repeat the doctrine, that *unconsciousness* (*id est*, want of perception of impressions upon any of the senses) will be in direct proportion to the *degree of compression;* and that when traumatic compression indicates an operation, *no anæsthetic will be required—insensibility will be present, and indicative of the degree of compression*. We do this too, in all kindness and respect, and with no other desire than to promote truth; and we regret that our correspondent did not receive the "editorial endorsement" in the "same friendly spirit" that he did the criticism. G.]

London exclaim with more truth than poetry "Othello's occupation's gone."

I happen to be lodging adjacent to Cavendish Square where one's eyes are dazzled with brass plates inscribed with the names of Paget, Forbes, Winslow, Shaw, Westcott, et hic genus onme, and there, horrible dictu, majestic tom cats prowl undisturbed in their amatory or pedatory pursuits, apparently unconscious of their proximity to geniuses renowned for their sections whether vivos or mortuos. And shall the truth be told? the Janitor who gives one access to the sanctum sanctorum of Sir Benjamin Brodie was found dosing at 11 A. M.

London is out of town; some for pleasure, others in pursuit of what they would be more than pleased to regain—the health yielded as tribute to fashionable life in the winter.

Saturday week, I visited old St. Bartholomews. In the operating theatre, a young female was relieved of a carious inferior extremity, flap operation—no tourniquet—the bone was sawed through immediately below the trochanter—Stanley fecit — chloroform still in vogue. The venerable Lawrence still at his post but evidently inclining to his mother earth. Paget, attenuated and over wrought, but with the same thoughtful brow and piercing eye. He is truly Hunter the 2nd.

I had occasion to see a case the other day of irritable ulcer in a varicose leg. After a variety of plans had been tried, my friend who shewed me the case, thought of an ointment of Belladoma cum Hydrarg.—the effect was excellent. He had formerly succeeded in curing a chancerous sore upon the lip of a woman by the same means, although it had baffled every other treatment.

There seems to be a want of co-operation among the profession in England for self protection—envy, strife and jealousy, between men and corporations. Let our American friends rejoice in the strength of unity, and demand as a right, the protection we deserve.

Truly Yours. A. G. MERRETT.

Editors Medical Independent:

Gentlemen.—Allow me to call your attention, to the enclosed circular and to the accompanying package of a new Pharmaceutical preparation which finds much favor with many eastern Practitioners. Its pleasant

taste, elegant appearance and the complete solution of the various phosphates in it, render it an elegible and valuable preparation where its use is indicated. Resp. Yours, HIGBY & STEARNS,

162 Jefferson Avenue, Detroit.

The circular issued by Higby & Stearns, and above alluded to, sets forth the fact that this preparation was introduced by *Professor Jackson*, of the University of Pennsylvania. That it is not intended as a popular remedy, but is respectfully submitted to the Medical Faculty as a *Nutritive Tonic;* well adapted to those cases in which there is an evident waste of the elementary matter in the system, so often observed as the result of chronic disease. Hence its value in cases which present a disordered condition of the organs of assimilation—as in Dyspepsia, &c. By careful manipulation the salts are all held in complete solution. Each fluid ounce contains one and a half grains of the Phosphates of Potassa, Iron and Soda, and *two* grains of Phosphate of Lime.

We have prescribed this remedy in a number of cases and are much pleased with its restorative effects.—(Editors.)

Pocket Instruments.—Tieman has filled, under our direction, an exceedingly compact case or pocket surgical instruments, one which can be conveniently carried in the vest pocket, thus becoming the surgeon's constant companion. Of the selection of instruments, we will only say, it is in accordance with *our own taste*, and answers admirably *our* wants. But of the forceps we would speak more particularly: our wish was to combine in one, the dressing, artery and needle forceps, and Mr. Tieman has, with his usual skill, executed our idea to perfection. By letter he thus speaks of it: "The idea is beautiful; we might call it a universal forceps." * * * "This will hold a blunt or sharp needle, or a plastic pin, as solid as a rock, and can be used for ligating arteries, torsion, dressing, etc.; and the case will be *one of the most compact and most useful.*" An artery needle accompanies the forceps. The case can be ordered of Tieman, or of Higby & Stearns of this city, who keep a general supply of surgical instruments at New York prices. G.

The Approaching Session of the Medical Department—Means of illustration.—Anxious to afford, as far as possible, practical il-

lustrations of our teaching, we would remind the profession that operations are made before the medical class free of charge, and solicit their aid in directing the attention of those who require surgical assistance, and who would be glad to avail themselves of the gratuity, to this fact. Session opens on the first of October, and continues six months. G.

Changes in the Faculty of Rush Medical College.—Three vacancies having occurred in this institution, by the resignations of Drs. John Evans, W. B. Herrick and H. A. Johnson, the following appointments to the vacant chairs have been made, viz: Dr. W. H. Byford, M. D., of Evansville, Indiana, to the chair of Obstetrics and Diseases of Women and Children. Dr. H. A. Johnson, leaving the chair of Materia Medica, takes that of Physiology and Pathology. Dr. John H. Rauch, M. D., of Burlington, Iowa, has been appointed to the chair of Materia Medica, Therapeutics, and Medical Jurisprudence.

Medical Schools—Consolidation.—After some diplomatic negotiations, an arrangement has been effected, whereby "*the Medical College of Ohio*," and "*the Miami Medical College*," located at Cincinnati, have become consolidated, under the name of the former. Drs. Judkins, Comegys, Foote and Mendenhall, of the Miami School, are members of the new faculty; Drs. Amor, Marshall, Warden and Tate withdrawn.

Medical College of Georgia.—Dr. G. M. Newton has resigned the chair of Professor of Anatomy in the Medical College of Georgia, and Dr. Henry F. Campbell, formerly Professor of Surgical, Comparative and Microscopical Anatomy, has been appointed in his place.

Books Received.—We have received from the Publishers, Blanchard & Lea, through the politeness of Raymond & Selleck, Gross' Elements of Pathological Anatomy, third edition—Williams' Principles of Medicine, a new edition—Kirk's Manual of Physiology, new edition—and Churchill on Diseases of Women, new edition; all of which will receive early attention.

To Subscribers.—Those of our subscribers who have responded to the bills sent out in the July issue, have our sincere thanks, and the satisfaction to be derived from the thought, that they are aiding us in an enterprise, which, we trust is a credit to the profession in the North-West. To those who are yet delinquent, we would most respectfully, yet *earnestly* present our considerations of profound—*need*, reminding them that our terms are "*in advance*," and that we *Independently* depend upon them for prompt remittances.

Impromptu.—The following, which we find in the St. Louis Med. Journal, was written by a patient of Dr. C. A. Pope, of St. Louis and left on his table, accompanied by a fee. It serves to illustrate the facility with which one may command the poetic muse. when he really *feels* what he desires to express.

May 24th, 1857.

Dear Medico: I am off to-morrow for New York, via the Falls of Niagara, where the water runs down hill with nothing on earth to hinder it. I am sorry not to have seen you again before leaving. But—

When sorrow's cloud is cast athwart
The sunshine of my mind,
When, I, with gloomy care distraught,
No recreation find;
When sighing o'er my hapless lot,
And what I used to be—
I'll seek some quiet, tranquil spot,
And pass a small bougie.

Let strictures on my conduct pass;
Unnoticed let them be;
A stricture somewhere else, alas!
Is more deplored by me.
In hope that blight on manhood's bloom
I yet effaced shall see,
I'll hie me to my quiet room,
And pass a small bougie.

Good bye,

Ever truly, yours

We sincerly hope that there may soon be as little "to hinder" the running of "the water down hill" in the case of the Doctor's poetical patient as there is in Niagara.

THE

Medical Independent,

A Monthly Review of Medicine and Surgery.

EDITED BY

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AND

L. G. ROBINSON, M. D.

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ARTICLE I.—*Chapters from an Unpublished Monograph.*
By H. R. SCHETTERLY, M. D.

Examination of the Popular Theories of the Circulation.—The simplest theory of the circulation is that adopted by Prof. Liebig. He asserts that the heart is both a suction and a forcing pump. That is, when the auricles dilate, vacuums are produced in their cavities, and the blood rushes from the veins into these vacuums to fill them; and, when filled, they contract and force the blood into the ventricles, which are then dilating and producing vacuums in themselves, that are filled by the contracting auricles. And, lastly, when the ventricles are full, they contract, while the auricles are again dilating,—the right one forcing all the blood through the pulmonary arteries into the lungs; and the left one, having received the same blood from the lungs through the pulmonary veins and left auricle, forces it through the aorta to every part of the body. According to this theory, the venous circulation is maintained by the suction of the auricles, and the arterial by the contraction of both auricles and ventricles.

His words are:—"By the expansion of the heart—an organ in which two systems of tubes meet, which are rami-

fied in a most minute network of vessels through all parts of the body,—there is produced a vacuum, the immediate effect of which is, that all fluids which can penetrate into these vessels are urged with great force towards one side of the heart, by the external pressure of the atmosphere. In a word, the heart is a forcing-pump, which sends arterial blood into all parts of the body; and also a suction pump, by means of which all fluids, of whatever kind, as soon as they enter the absorbent vessels which communicate with the veins, are drawn towards the heart." The above is from his treatise on Animal Chemistry. But afterwards, when he wrote his treatise on the Motion of the Juices, he states (p. 187), what every physiologist knows, that "the "pressure of the gases, which pervade every part of the "living body, exactly counterbalances the pressure of the "atmosphere upon the external surface;" and who does not know that such pressure cannot produce motion in any direction? This theory is proved to be an illusion, by the following facts:—

First—Dr. Arnott and others have proved, by experiments, that suction cannot act through tubes so yielding as the veins are, because the sides will flap together—*i. e.* be pressed together by the atmosphere—near the place where suction is applied to them. To remove this objection, Dr. Dunglison observes that Dr. Arnott's experiments were made with veins taken from dead bodies, and that it remains to be proved that the veins in living beings would flap together; but, on the next page, he says—"Generally, when the chest is dilated in inspiration, the vein"—the external jugular vein—"empties itself briskly, becomes flat, and its sides are occasionally accurately applied to each other." Is not this a flapping together?—and in the living body too!

Second—Instances are on record, in which the muscular tissue of the heart was found so much wasted by atrophy, after death caused by other means, that it was difficult to imagine how the heart could have exerted any force to propel the blood—though this atrophy must have been going on

for a length of time, and that, too, without exciting even a suspicion that the heart was diseased.—See Carpenter's Human Physiology.

Third—Infants have been born entirely destitute of a heart, without the possibility of the twin fœtus having had any agency in maintaining their circulation; and yet, their own blood must have circulated in them without a heart; for, as the maternal blood is not conveyed to the fœtus at all, in any case, they could not have been nourished without a circulation of their own.* Moreover, it is certain that there is blood in motion, before a heart is developed, in every embryo; and Wolff, Rolando, Dœllinger, Pander, Prevost, Dumas, Von Baer, Hunter, Gruithuisen, Kaltenbrunner and others, saw globules of blood in motion in the incubated egg, in the midst of cellular tissue of inflamed parts, in tissues undergoing regeneration, and during the cicatrization of wounds—even before vessels appeared in those parts.

Fourth—Sir E. Home has proved that "the nerves, which accompany the arteries, regulate their actions; and, through their agency, the blood is distributed in different proportions to different parts of the body." Accordingly, in local inflammation—such as whitlow in a finger, etc.,—the circulation is greatly increased in the inflamed part, while the action of the heart, and of other blood-vessels, remains entirely unaltered. On the contrary, in senile gangrene, the circulation ceases altogether in one or both legs, though it is proved that no obstruction in the blood-vessels exists at that time.

Fifth—By the aid of a microscope, Drs. Haller, Spallanzani, Philip, Treviranus, Tiedemann and others, have seen the blood moving in the smaller vessels of different animals, for some time, after the larger vessels had been tied, or the heart itself removed. Again, if a piece of a blood-vessel be cut out, and an artificial tube be substituted instead of it, the

* See a case of this kind in the human fœtus, by Dr. Jackson, of Boston, in the American Journal of the Medical Sciences for February, 1830,—p. 362. Another, by Dr. Houston, in the Dublin Journal of the Med. Sci., No. 29. Also, Prof. Graves', in the London Medical Gazette of June 30, 1838,—p. 562.

blood will not continue circulating through this tube for any length of time.

It is almost needless to observe, that none of these conditions could possibly exist, if Liebig's theory were true,—*i. e.*, if the contraction of the heart, or even of the heart and blood-vessels, were the true cause of the circulation. But there are still other objections to prove this mechanical theory illusory. It may, however, be added, that all these objections may not only be reconciled with the electrical theory, which operates through the medium of attraction and repulsion, but that they all go directly to prove it true.

Professor Draper, of New York, proposes a chemical theory, in his Treatise on the Organization of Plants. He locates the propelling power of the blood in the pulmonary and systemic capillaries. In the pulmonary capillaries, the venous blood is changed into arterial; and in the systemic capillaries, the arterial blood is changed into venous. That both these changes are effected by electro-chemical action, is doubtless true; but that this action generates a localized power, that drives the blood out of these capillaries "with an inexpressible force," as he asserts, is proved to be an illusion, by the fact that the capillaries are not adapted to sustain any force tending to burst them,—and infinitely less are they adapted to resist an inexpressible force.

From the height to which the circulating pressure of the blood raises a column of quicksilver in a hæmadynamometer, when this instrument is attached to the arteries of horses and other animals, Poiseuille has calculated that, in the arteries of men, the blood generates a momentum equivalent to the pressure of four pounds three ounces and forty-three grains; and he says this force is the same everywhere, in the smallest as well as in the largest artery. Now, this fact proves, beyond all cavil, that the force with which the blood circulates is not a localized, not a propelling, but an attracting force,—constant, and consequently everywhere the same, as will appear in the next article. For a little reflection will convince any philosophic mind, that the retarding causes of

the circulation—such as friction, gravity, curvatures in the vessels, anastomoses, etc.,—must inevitably diminish the force impressed upon the blood, if that force were a local one. And a local force, continually interrupted,—and this is the kind of force assigned as the principal motive power of the circulation, by all the popular theories,—must be vastly greater than a constantly attracting force, which everywhere overcomes retarding causes, either local or constant, as they occur; and, therefore, can nowhere exert any bursting force or pressure against the sides of the blood-vessels.

Now, it is a hydrostatic law, that fluids press with the same force in every direction, and this force is directly proportional to the altitude of the column of the fluid. And again, if there be a hydraulic force that propels the column forward in the containing vessel, this force must obviously be sufficient to overcome all retarding causes; and when it is applied locally, as all the popular theories assume it to be in the blood-vessels, the sides of that part of the vessels where it acts must sustain and resist all this force tending to rupture them. Next inquire whether the capillaries are adapted to resist any such force?

On this point, all modern Physiologists are agreed; and the following quotations, from Dunglison's Physiology, decide the question:—"All the coats of the capillary arteries diminish in thickness and strength as the tubes lessen in size, but more especially the middle coat, which, according to Wedemeyer, may still be distinguished, by its color, in the tranverse section of any vessel whose calibre is not less than the tenth of a line; but entirely disappears in vessels too small to receive the wave of blood in a manifest jet. But, while the coats diminish, the nervous filaments distributed to them increase; the smaller and thinner the capillary, the greater the proportionate quantity of its nervous matter. The coats of the capillaries, becoming successively thinner and thinner, at length disappear altogether, and the vessels —many of them at least—terminate in membraneless canals or interstital passages, formed in the substance of the tissues."

But, although a part of the apparatus of the intermediate circulation may be arranged in this manner, there are reasons for the belief, that a more direct communication between the arteries and veins exists also. The substance of an injection passes from one set of vessels into the other, without any evidence of an intermediate extravasation. The blood has been seen, too, in living animals, passing directly from the arteries into the veins." Leuenhock, Malpighi, Cowper, Chesselden, Spallanzani, Hales, Thomson, Cuvier, Rusconi, Dœllinger, Carus, and many others, saw this distinctly in the swim-bladders, gills and tails of fishes, in the mesentery of frogs, etc.,—which are transparent. So there must be intermediate vessels after all, though their coats are too thin to be seen, even with a microscope.

The reader can now judge, whether the capillaries are capable of resisting the inexpressible force of Prof. Draper—the "*vis a tergo*" of the ancients, who supposed the blood to be forced through them by the contraction of the heart exclusively, as Liebig still does. If not, then the Professor's theory is nugatory, of course; and so is every other theory that requires the capillaries to resist half the force that propels the blood, according to the popular theories.

The principal functions of the capillaries are manifestly:—*First*, the absorption of the elements of the previously vitalized matter, after it has been decomposed to yield force, by electricity conducted to the tissues by the nerves with which the capillaries are so abundantly supplied; *second*, the deposition of similar vitalized materials, prepared from food, in their stead, and thus to enable the various organs to continue performing their various functions. And the philosophic reader can not avoid seeing that, for these functions, the capillaries are most admirably adapted; but are entirely unfit to generate mechanical power for propelling the blood. These two functions are most admirably sketched by Dr. S. Smith:—

"In every part of the body, in the brain, the heart, the lungs, the muscles, the membranes, the bones, each tissue

attracts only those constituents of which it is itself composed. Thus, the common current, rich in all the proximate constituents of the various tissues, flows out to each. As the current approaches the tissue, the particles appropriate to the tissue feel its attractive force, obey it, quit the stream, mingle with the substance of the tissue, become identified with it, and are changed into its own true and proper nature. Meantime, the particles which are not appropriate to that particular tissue, not being attracted by it, do not quit the current, but, passing on, are borne by other capillaries to other tissues, to which they are appropriate, and by which they are apprehended and assimilated. When it has given to the tissues the constituents with which it abounded, and received from them particles which are no longer useful, and which would become noxious,—the blood flows into the veins, to be returned by the pulmonic heart to the lungs, where, parting with the useless and noxious matter it has accumulated, and replenished by new proximate principles, it returns to the systemic heart, by which it is again sent back to the tissues."

Most Physiologists suppose that the vitalized matter disintegrated in the production of mental, vital and muscular force, is absorbed by the lymphatics. But this assumption is obviously gratuitous, for the lymphatics exercise a selecting power, as do the lacteals, and convey their contents directly into the thoracic duct, or into the blood. The chyle and lymph must, therefore, be analogous in composition; but it is extremely unlikely that matter wholly deprived of the properties which the food acquired in the processes of digestion and chylification, can be again appropriated to nutrition, without being again subjected to the operation of the same preparatory influences; and, preparatory to this subjection, the elements disintegrated, and the compounds formed from them in the living organism, must be again subjected to the influences of vegetable life, as they were at first. It is far more likely that the lymphatics absorb the liquid exhaled by the serous membrane, which requires but little preparation

for nutrition; and that the disintegrated materials are conveyed to the liver and kidneys by the capillaries and other blood-vessels, which have no power of selection, to be again secreted, and finally evacuated through the bowels and urinary bladder.

In his Treatise on Human Physiology, Dr. Dunglison states that "the action of the capillaries, and the contraction of the arteries and veins, can alone be regarded as sources of motion, the elasticity of the vessels being simply directors, not generators of force." To these he afterwards adds, as accessory cause, "the suction power of the chest," which he thinks produces "an approach to a vacuum" in the chest, to fill which, "the blood as well as the air, is forcibly drawn towards that cavity." To the rush of the blood to fill this supposed approach to a vacuum, he attributes the dilation of the external jugular vein during expiration, and its collapse inspiration. He then adds that "expiration manifestly also accelerates the motion of arterial blood, especially forced expiration." Megendie, who investigated this subject by experimenting on animals, has proved that the turgescence, witnessed in the jugular, extends to all the veins; and that it is caused by a larger quantity of blood being conveyed by the arteries into the veins during expiration than during inspiration. But, he says, ordinary respiration produces neither the acceleration of the blood in the arteries nor the turgescence in the veins, unless the animal struggles, and, when it does so, both are greatly increased.

The truth, however, is, that when an increased quantity of air is inspired, for whatever cause, the circulation is accelerated, and when muscular motion (which always augments respiration), is superadded to augmented respiration, this acceleration becomes still greater; but, when the vessels are full of blood, the turgescence of the veins is not exhibited, and takes place only after copious depletion, or during the anæmic excitement. *The cause, however, of these phenomena, is not the approach of a vacuum in the chest; but the increased quantity of electricity inspired with the air, which*

is the primary cause of all sanguineous circulation, propels the blood with greater force, as is proved by the fact that, when the air is withheld, neither muscular motion nor any other cause, can maintain the circulation after the air, contained in the lungs, is all consumed. And, accordingly, in all cases of asphyxia, the circulation is first arrested in the capillaries of the lungs, while the previously electrified blood, that has just left them, continues to flow and empties the arteries confessedly more completely than death produced by any other cause, ever assigned by physiologists, can possibly empty them. Muscular action doubtless causes an increased rapidity of the circulation, either in all the muscles, when all are exerted; or in particular muscles, when these alone act; but, in neither case, can this increase take place without proportionally augmenting respiration, at the same time.

The mechanical agency of the heart and capillaries has been considered and refuted above; and it only remains to discuss the contraction of the arteries and veins. The insufficiency of the contraction of the heart to propel the blood through the capillaries—especially when it passes through three sets, as it does in the portal part of the circulation of man and mammalia, and particularly in fishes, whose heart possesses but little muscularity,—has long been justly doubted, and even been denied by some of the most eminent physiologists. Hales, Hunter, and others, assume that the arteries alternately dilate and contract; for, say they, "we feel it when they pulsate;" while Bichat, Perry, Weitbrecht, Lamure, Dœllinger, Rudolphi, Jæger, Bostock, and others could never see the alternate dilatation and contraction of the arteries, though Hastings, Poiseuille, Œsterreicher, Segalas, and Wedemeyer, say they did see it.

To settle this long disputed question, Dr. Perry made many accurate experiments, the result of which is, that *the arteries do not alternately dilate and contract, perceptibly.* But, the most decisive experiments are those stated by Dr. Carpenter, made by an eminent experimenter, whose name has escaped recollection. He inclosed a part of a living artery laid bare,

in a tube having a small glass tube rising perpendicularly from its side. The space around the artery, in the large tube, was then filled with colored water; and between the pulsations of the arteries, fell above and below the part inclosed, the water rose just perceptibly in the small glass tube, showing that arteries do contract very slightly when the ventricles of the heart do so, and expand again when they do. But these alternate contractions and dilatations are produced solely by the elasticity of the arterial tubes, which every experimenter asserts exists in their coats, or else there can be no elasticity; and, if so, then they "are simply directors, not generators of force" according to Dunglison, Carpenter, and others. Besides this, there is no evidence that the so called muscular coat of the arteries, consists of contractile fibres. Magendie, Nysten, and others, were not able to produce contractions by applying the electrical and mechanical excitants of muscular irratibility; and the chemical analysis of Berzelius and Young, also prove that the transverse fibres of the arteries differ essentially from those of proper muscles. But, lastly, in order to aid in propelling the blood forward, it is most obvious that the blood-vessels should commence contracting at the heart, continue their contractions gradually along the arterial tubes, then along the capillaries, and then along the veins; for, unless this were the case, the contractions would evidently tend as much to keep the blood out of them as to drive it forward, if this mechanical theory were true; but no such gradual contraction is attributed to them by any physiologist. Dr. Dunglison says, "it is difficult, indeed, to believe that a contraction in the capillaries does not exist;" and the fact that the blood continues to circulate in them, after the heart has been removed, and even after death, they take as proof that it does exist. But still, Thomson, Philip, Hastings, and others, assert that neither the small arteries nor capillaries contract, except on the application of cold, or of electrical or mechanical stimulants, and, in this respect they differ from the larger arteries and from veins. Wedemeyer repeated the experiments of Thomson,

etc., with the greatest care; and proved that "*these vessels do not contract* so long as the circulation is allowed to go on in its natural state; but so soon as excitants are applied to them an alteration of their calibre becomes perceptible. Alcohol arrests the flow of blood without producing much apparent contraction of the vessels. Chloride of sodium, in three or four minutes, caused the vessels to contract one fifth of their caliber, which contraction is followed by dilatation, and a general retardation and stoppage of the blood." Cold water and cold air poured on the structure under examination, produced even an entire obliteration of the vessels, as proved by Hunter and Schwann, if persevered in. In from ten to thirty seconds, and sometimes immediately, on the application of the galvanic current, these vessels contract, some one-fourth, others one-half, and others three-fourths of their calibre; but in from ten minutes to several hours, the vessels resumed their diameters, and a second application of electricity produced little or no effect on them. Doctor Carpenter asserts positively that the small arteries and capillaries do not alternately dilate and contract naturally; and that in them the blood flows in a steady stream; and Doctor Philip has proved that stimulants, especially the electrical, applied to the central parts of the nervous system, produces a manifest contractile effect upon the action of the small arteries and capillaries. This contraction of the capillaries is the cause of chilblains, which are sure to take place when these vessels become too small to transmit the blood corpuscles; but previous to this the part about being frost-bitten shrinks. On the coast of Terra del Fuego, December 21st, 1769, Sir J. Banks, Dr. Solander, and others, took an excursion for plants; and the cold became so intense, when night set in, that most of them were seized with an irresistable desire to sleep. Dr. S., who slept less than five minutes, almost lost the use of his limbs, which shrunk so much that his shoes fell off from his feet; two of the men could not be waked again and perished.

The large veins (venæ cavæ), near the heart have a pulsatory motion; and, in some animals, pulsate after the heart

has been removed, or after death when the heart has ceased to pulsate; and even when cut out of the body, these vessels may be made to resume their pulsatory motion, by applying stimulants, and especially an electric current, to them. These facts have been observed by Steno, Lower, Borrachius, Wepfer, Whytt, Haller, Lancisi, Muller, Hall, Flourens, Allison, and others; and with them pulsatory motion is synonymous with alternate dilatation and contraction; but this assumption is entirely gratuitous. That all pulsating vessels are in motion, no one doubts; but this motion consists in their alternate shortening and lengthening, termed "locomotion," much more than in alternate dilation and contraction. Doct. Dunglison says: "It seems very doubtful, whether the veins generally possess any sensible contraction like that of the venæ cavæ and pulmonary veins, near the heart; for, although irritated by mechanical and galvanic stimuli, by Haller, Nysten, Muller, Allison, and others, no motion whatever could be detected in them;" and he states the same doubt with regard to the heart and arteries, on the authority of Ure, Bichat, Treviranus, and others. In all these facts there is a perfect agreement between Drs. Carpenter and Dunglison, and yet both of them agree also in assigning the contraction of the arteries, the action of the capillaries—through which Carpenter, however, says the blood flows in a steady stream,—and a certain degree of contraction of the veins, as among the principal propelling forces of the circulation. That the veins are possessed of some degree of elasticity, is generally admitted; but even this is very trifling, as is manifest from their becoming varicose in the lower extremities, simply, as it seems, in consequence of the gravitating power, for a horizontal position diminishes the varicosity. That nothing which can possibly contribute to maintain the circulation, may be overlooked, Dr. Carpenter invokes voluntary muscular motion, because, in phlebotomy, the blood is made to flow more freely by moving the fingers; but, surely, the circulation goes on, and often much more rapidly than in health, while the volun-

tary muscles are perfectly passive. Some of the phenomena stated will be explained in the article on the pulse, in which it will appear that the pulsations are not caused by contractions and dilation of the blood-vessels.

There are other theories extant, intended to assign a cause or causes of the circulation of the blood,—such as those of Mrs. Willard and Dr. McKall;—but this article is already too lengthy, and they do not really require a systematic refutation. All the arguments advanced on this subject, in text-books, have been pretty fully examined; and it may safely be said that the circulation may go on, normally, and does so evidently, in human monstrosities, in the leech, and in other inferior beings, without the aid of any of the causes examined. But even if any, or all, of these were true, *they would still be secondary or remote causes, all of them being obviously effects of another—a primary cause—of which there can be but one.* Hitherto physiologists have indulged largely in the habit of imagining causes, because they were indispensably necessary to even a plausible substantiation of their imaginary theories; and there can be but little doubt that, in their experiments, some of them fancied they saw the effects they desired to see, but which had no real existence; for, as an eminent physiologist observes, there are more false facts in physiology than false reasoning. It is high time that in tracing effects to their causes, in every branch of science, nothing be admitted as a cause, until its existence be positively and indisputably proved, independent of its necessity to the production of the effect in question, or of its necessity to substantiate any theory.

The Circulation of the Blood is an Effect of Electrical Action.—Every function of the living human and animal system may be temporarily suspended, without extinguishing life, except respiration, innervation, and the circulation of the blood. These are so intimately associated, and dependent upon each other, that neither of them can stop for a quarter of an hour, and generally not even five minutes, without a cessation of the other two, also, and an irrevokable extinction

of life. In all cases of gradual death (Asphyxia) the circulation goes on in the arteries, which empty themselves quite, or almost entirely, after death has become apparent: but, so soon as respiration ceases, the pulmonary capillaries can no longer transmit blood, which therefore stagnates in them, and consequently accumulates in the veins that convey it to the lungs to be arterialized, the pulmonary arteries—so called solely because they convey blood from the heart instead of to it—performing the function of veins. But a stroke of lightning; a blow upon the abdomen seriously affecting the great ganglia of the sympathetic nerve; a dose of prussic acid, or inspiring sulphuretted hydrogen gas, produces death so soon that the circulation is instantaneously arrested, and the blood consequently stagnates in the arteries, capillaries, and veins, alike. A stroke of lightning and a blow upon the region of the cardiac or semilunar ganglion, obviously act upon the nervous system, for, in these cases, there is often no appreciable injury found after death in any part of the organism; and Prof. Liebig states that prussic acid and sulphuretted hydrogen decompose the peroxide and protoxide of iron found only in the blood and chyle, and secreted with bile and milk. Hence it it seems that iron exercises a very important function in the circulating blood, serving, probably, to polarize the corpuscles, with the coloring matter of which it is found associated.

The reason why the circulation continues in the arteries for sometime after death, and why it begins to stagnate in the pulmonary capillaries first, is—the veins, having no nerves to electrify them, are negative to the blood circulating in them, and therefore attract it continuously to the lungs; while the lungs are electro-positive to the venous blood, and remain so for sometime after death, and consequently continue to attract, instead of repelling and expelling the venous blood, which, being no longer electrified, remains unchanged when respiration is interrupted, and therefore continues to be attracted. Hence the stagnation in the pulmonary capillaries. On the other hand, the blood that has just passed through the pulmonary capillaries, has been electrified by the air contained

in the air tubes, is therefore electro-positive to the arteries, and is consequently continuously attracted by them; and therefore continues to circulate, and thus empties them in cases of asphyxia. All this will be understood when it is remembered that, unlike electerized substances attract, while like electerized repel, each other.

In the article on respiration it is shown that atmospheric air is decomposed in the lung, and the oxygen and electricity there set free, enter the blood, while the nitrogen is re-expired with the carbonic acid formed in the arteries and capillaries by the combination of the oxygen with the carbon conveyed into the blood by the lacteals. The electricity is then contained in the blood; and, as liquids are non-conductors of electricity, except by carrying it (convection), this agent requires to be set free from the blood for the purpose about to be explained. Now, M. Dessaignes, Principal of the College at Vendome, France, read a prize essay to the French National Institute in 1810, on the subject of Phosphorescence, Heat, Light, etc., in which he proved, by numerous experiments, that electricity (to which he attributes all phosphorescence, etc.) may be pressed out of all bodies, whether solid, fluid, or gaseous. *Here, then, we have the principal function of the heart, i. e. to set free the electricity derived from the atmospheric air, from the blood*, BY PRESSURE; its other principal function being to keep separate the venous from the arterial blood, sending the former to the lungs to be arterialized, and distributing the latter to every part of the body for nutrition, calorification, secretion, and for all the other vital functions. That the former function, here assigned to the heart, is not imaginary, is proved by facts—First. That some cold blooded animals have no heart, and in all these the heart is a very feeble organ compared with that of the mammalia generally. Second. Almost, if not quite, all the Physiologists consider the relaxation of the muscles to be a passive function; but an eminent experimentalist whose name is stated by Dr. Carpenter, but has escaped my recollection, grasped the heart of a living animal, and found it to dilate (relax) with great force; while

another experimentalist scratched the heart, after it had been removed from the body, and it contracted with such force as to drive the needle deep into its own substance. Now, a passive action can, in no case, manifest any force that has not been impressed upon it by some motor power, and in this case, it must yield the previously received force in a straight line with the direction in which it was impressed upon it at first; but, in case of the heart's relaxation, the relaxing force manifests itself in the contrary direction. Consequently, the relaxing force of the heart can be explained only on the principle of electrical repulsion.

In the article on the nerves it is stated, on unquestionable authority, that the arteries are so abundantly supplied with sympathetic nerves,—principally arising from, or rather, terminating in, the cardiac ganglion,—as almost to constitute an additional coat to these vessels; while the veins are almost destitute of nerves. Dr. Carpenter says, the functions of the sympathetic nerves so profusely distributed upon the arteries, but not the veins, must be important, but remains to be discovered, or in words to this effect; and, to discover these functions, has cost me some years of arduous, but very pleasant labor.

The primary cause of the circulation has already been so frequently and so plainly indicated that it is almost superfluous to elaborate it more fully. The principal function of the sympathetic nerves spread over the arteries, is to conduct away from them, the electricity pressed out of the blood by the left ventricle of the heart, to the nervous centres, to be deposited in these for the uses of corporeal and mental action and for carrying on the vital functions, as it may be needed. Hence the arteries are continually kept in an electro-negative state to the blood they convey, and consequently attract it through their entire course, just as the latex-vessels in vegetables do, and by the same agency. The electricity being thus continually conducted away from it, the electrical state of the blood becomes more and more negative, after it leaves the heart; while the electrical condition of the vessels, themselves,

remains every where the same. The velocity of the blood, therefore continually decreases, in proportion as the electrical condition of the blood and vessels become more and more alike. In the capillaries, the blood desposites the electrified materials prepared for nutrition; and receives a quantity of carbonic acid from the matter disintegrated to produce force, in addition to the quantity generated by combustion in the the arteries; the greater part of both of which is expired through the lungs, and the residue evacuated through the skin; the other products of disintegration being conveyed to the liver and to the kidneys, to be secreted by these organs from the blood, and evacuated through the bowels and urinary bladder. By the time the blood has passed through the arteries and capillaries, it has lost its arterial character altogether, has become venous blood, and undergoes no farther change till it arrives again in the pulmonary capillaries. The electricity set free from it, by the pressure of the left ventricle of the heart, having all been conducted away from it while passing through the arteries and systemic capillaries, the electrical condition of the blood has become much lowered when it enters the venous part of the capillaries. The veins, being very scantily supplied with nerves to electrify them, are still electro-negative to the blood circulating in them, and consequently continue to attract it through their entire course, as do the arteries; but with a much diminished force, the electrical condition of the veins and blood being more nearly alike than in the arteries, causing it to move slower. Hence, the reason why the arteries are so profusely supplied with sympathetic nerves, and the veins so scantily; why the venous apparatus is more than twice as capacious as the arterial; and why bleeding (Hæmorrhage) from the arteries is so much more difficult to arrest than that from the veins, is very obvious, being merely a manifestation of adaptation of means to ends.

That the electricity conducted away from the arteries by the sympathetic nerves, is stored up for gradual use, in the nervous centres—in the brain, the sympathetic ganglia, and, per-

haps, in the spinal ganglia or spinal marrow,—is proved by many facts. If this be not the case, then the reason why exhaustion follows severe corporeal or mental labor; why strength is renewed by rest, and, especially, by sleep; and why sleep—a total cessation of muscular and mental activity, and a consequent suspension of expenditure of force to give time for accumulation,—is indispensable to health and activity, and even to the perpetuity of life itself, are all totally inexplicable. True, Physiologists say these are required to renew nervous energy. But what is nervous energy? Can it be demonstrated in any way except by explaining the ignotus per ignotum? Can the living system generate power by any means, but by the decomposition of living matter; or by deriving it from an exterior source? If produced by the former method, then rest and sleep consume part of the body, which is contrary to known fact and to analogy; if power be derived from the latter source, then it must be from atmospheric air, for food can only supply the waste of living matter produced by disintegration; and, in this case, the source of power must be electricity, for, it has been proved that neither oxygen nor nitrogen can supply power, and the atmosphere contains nothing, besides these three ingredients, that can possibly give power. But Physiologists speak of this vital power—be it nervous energy or electricity—as if it were created by the living system. Is every living creature a miniature creator? I, for one, always thought there was but one Creator, whose infinite omniscience shines so resplendent throughout creation. What absurdity comes next? "From nothing, nothing can come," is an established maxim.

Again, Prof. Ure states the well known fact that,—"Immersion in cold water accelerates greatly the extinction of life arising from suffocation." Now, if the life sustaining agent be electricity, this fact is easily explained; for it has been shown the water possesses a very strong attraction for electricity and a capacity of receiving an indefinite quantity from a lightning rod; but, if this agent be nervous energy or life itself, differing from electricity, then all is dark as Erebus.

Is nervous energy possessed of the same properties as electricity, to be abstracted from other substances by water &c.? If so, what evidence is there that they are not identical?

It is well known that, when the spinal marrow is divided or compressed, titilating the soles of the feet causes retraction of the limb, without exciting consciousness. Sir A. Cooper divided the great sympathetic nerve by applying a ligature to it in dogs, and found that but little effect was produced by doing so, the functions of the vital organs, supplied by it, continuing to be performed as usual, which proves that it does not derive its influence from the brain. It is also well known that, in cases of suffocation, life becomes irrevokably extinct in persons who have spent their strength by violent exertion, much sooner than in those possessed of full vigor, previously acquired. Dr. Nysten's experiments show that the sympathetic nerve retains its irritability much longer than the nerves of animal life, and some parts of it longer than others, which can be owing only to their possessing a store of motive power in reserve. Experiments prove, accordingly, that, so long as the divided portions of the sympathetic have ganglia, the portions continue to act as usual; but, the destruction, or even a blow upon the region of a single principal ganglion, produces instantaneous death. All the facts stated, go to prove that the ganglia are depositories of vital agency constantly kept in reserve; not that the sympathetic is unimportant in the living economy, nor that every part of it is a generator of nervous influence, as Dr. Dunglison infers from Cooper's experiments. And Dr. W. Philip "considers it as proved by his experiments, that the ganglia communicate to the nerves proceeding from them, the general influence of the brain and spinal marrow." The mind can act upon the sympathetic nerves, only through the medium of mental emotions; and, by this means it sometimes withdraws such an amount of electricity from them, as to produce instant death, or hopeless mental aberration, in other cases.

The statement that the electricity inspired with the air, is pressed out of the blood by the contraction of the left ventri-

cle of the heart, is not a baseless assumption. With a microscope magnifying to three hundred diameters, Prof. Wagner demonstrated that, in the large arteries, the blood corpuscles have a whirling (rotary?) motion, forming a closely crowded stream, in the middle of the vessels, without ever touching their parietes. Between the main stream of the blood and the inside of the vessels, he always observed a distinct space containing liquor sanguinis. In this liquor a few white corpuscles, which he considers to be lymph, move on at a rate ten or twelve times slower than the red ones. This clear space is seen also in the larger capillaries, but disappears in the smaller; and is not at all perceptible in any part of the pulmonary circulation, in which the white and red corpuscles proceed pari passu promiscuously. This difference must mean something, and is therefore worthy of notice. The pulmonary arteries and veins are not supplied with sympathetic nerves in a manner at all analagous to that in which the systemic arteries are, as it were, clothed with them. The blood conveyed from the heart to the lungs, by the pulmonary arteries, is venous; and that returned from the lungs to the heart, by the pulmonary veins, though arterial, can not have the electricity it contains pressed out of it, till it enters the left ventricle. In the venous blood passing through the right side of the heart to the lungs, there is, therefore, no electricity to be pressed out of it; and, out of that which is returned from the lungs to the left side of the heart, the electricity has not been pressed, and can not be conducted away to its depositories, till it is set free from the blood by pressure. Hence it appears that neither the pulmonary arteries nor veins, contain electricity in a condition to be conducted away to the nervous centres; and, consequently, they are not supplied with nerves for that purpose. Another manifestation of the law of adaptation.

The microscope has also been used to observe the motion of the blood in the capillaries of translucent animal tissues; and, in these observations, physiologists ignorant of the electrical property of solar light, have been as much perplexed

as in observing the circulation of sap in vegetables. When the focus of this instrument is concentrated upon a particular spot, the tissue becomes electrified at once; and, according as the vessels and the blood become alike or unlike electerized, the blood is repelled from, or attracted to, that spot. And, if the focus be then moved from one place to another, the motion of the blood becomes confused, so that no certain conclusion can be drawn from such experiments. But the effects produced by the microscope demonstrate the influence of electricity upon the circulation; and go so far to prove that electricity is the agent that moves the blood. "Ubi irritatio, ibi fluxus," and "Ubi stimulus, ibi afluxus," have been maxims in physiology for ages; but the fact is not yet recognized that irritation or stimulation, applied to any particular part, causes a flow of electricity from, or an afflux to, that part from the nervous centres, rendering it either positive or negative to the blood, which is consequently attracted or repelled by, and therefore flows to or from the affected part. The tissue of the irritated spot then becomes positive, and, if the stimulus be soon removed from it, it will repel the blood so soon as they become alike electric, and the blood will return again when the effect of the irritation vanishes, as shown by Fabre and Sarlandiere's experiments. All such experiments show that the heart has no influence over the circulation in the capilaries; and the automatic, or self motion of the blood, proposed by Harvey, Glisson, Bohn, Albinus, Rosa, Tiedemann, Treviranus, and half a dozen of other authors, is absurd upon the face of it.

The reader remembers Dr. S. Smith's graphic and beautiful description of nutrition. The reason why tissues select from the same current of blood, the particular elements necessary to replace the matter disintegrated from their own substance —the brain, the phosphates, the bones, the lime, etc.—or to be secreted by them and discharged from the body—the liver, the superfluous carbon, and the kidneys, the alkalies,—has never been even attempted to be explained, nor can it be on any but electrical principles. But, when it is remembered

that different organs, as well as different substances intended to nourish the living system, are naturally electrified unlike; that like repel, and unlike attract each other; and that the capacity of different organs, as well as different substances, for electricity, and the tenacity with which they retain it, vary also, then the reason and the cause of this selecting and rejecting power is very evident.

The explanation of the five insuperable objections urged against the theories of the circulation, in the preceding article is so plain that it is needless to subjoin it. But the attentive reader can not have missed perceiving that, if the theory of life advanced in these articles be true, there is every where, and especially in the present one, an all pervading adaptation of means to ends, which adumbrates the infinite wisdom of the Creator; and which should be considered the strongest argument to substantiate the truth of the electrical theory, and especially since the popular theories refuted, exhibit no such adaptation any where.

Article II. *Mechanism of Nervous Action.* By J. Adams Allen, A. M., M. D., Formerly Professor of Therap., Mat. Med. and Juris. in the Indiana Medical College; and late Professor of Physiology and Pathology, and acting Prof. of Mat. Med. in the University of Michigan.

In the September No. of the *Independent* I pointed out certain doctrines which I have taught since 1848.

Briefly, I shall now explain certain incidents of those doctrines, then and since developed.

The readers of the *London Lancet* will recollect that W. Tyler Smith, in the year 1848, pointed out the remarkable synergic relations of the three great organs of the sexual system,—uterus, mammæ and ovaria. Had he not been blinded by the term "excito-motory," it seems impossible to believe but that he would then have discovered the real mechanism of the "synergies." (Vide Lond. Lan., Oct. 1848, p. 327.)

One point only I here notice :—Tyler Smith urges in that series of lectures, that the motions attributed to the *fœtus in utero*, were, in fact, caused by motion of the uterus itself. There is no nervous connection between the mother and child —hence he argued the excito-motor influence, well known to give rise to these movements, must act upon the muscular tissues of the uterus. But careful investigation convinced me that the fœtus was itself the moving object.

The corollary is clear—the nervous arc induced a change in the blood which supplied the placenta, and this modified blood caused muscular contraction in the fœtus. The *modus*, the same as though moving the muscle of the mother.

Why does parturition occur at a fixed period?

Because the changes in the blood of the mother occasioned by the full development of the fœtus produce that particular molecular change in the uterine muscle which necessitates contraction. The molecular change is the cause.

The same blood-modification may occur from accidental causes, or through the medium of the nervous arc.

Why does application of the child to the breast provoke the mammary secretion? Is it necessary to introduce the motor before the secretory effect? Is it philosophical? Not at all.

Constant molecular changes, the necessary condition of life, keep up what is called "passive contraction," or the *tone* of muscle, but the exigencies of animal life require something beyond this; something which will *intensify* these changes to suit the wants of the animal. The nervous system meets this demand, but not by the introduction of new modes of operation in the moving tissues. The molecular changes are varied by the influence of the nervous system.

The various functions of vegetable life are carried on under nearly identical conditions: the organs, therefore, have no need of internuncii. But when animal life comes in to vary the conditions, then internuncii become necessary. But nature chooses uniformity, and thus no new machinery or unparalleled apparatus is made use of. Synergic organs reciprocally respond to the simple nervous arc.

Much confusion has arisen among physiologists by vague attempts to localize a particular nervous centre. The true centre is the nerve-vesicle, and may radiate its influence to yet another point, which again becomes a centre. The nerve fibre creates nothing. Collectively the fibres serve the purpose of bringing all the vesicles together, and yet keeping them apart.

It is proved that nervous impulses will pass by vesicles in contact as well as by nerves of commissure. The white fibre insulates and localizes the effect—the gray more nearly analogous to the vesicle, diffuses it almost indefinitely. This is shown by their several connections and by observation.

The points of contact of the so-called "sympathetic," and the cerebro-spinal systems are limited, yet they do exist; and gray and white fibres may intermingle, as we see fibrillæ of striated and non-striated muscular tissue side by side.

The ganglionic chain is little connected with the cerebro-spinal axis, simply because it is unnecessary, and nature never does a needless work. But this shows no real diversity of operation. As well might we exclaim against the optic nerve and vesicles because they are not intimately connected with a lumbar spinal nerve and its fused ganglion.

The outward expansion of the nerves of special sense, it is now believed, consists of vesicular neurine. It is quite probable that this is the general fact for all recipient nerves. The peculiar structure of this vesicular expansion fits it for undergoing changes on the application of its particular stimulus, and that only. Transmitted inward by the conducting tissue, it develops there another change, which may be reflected to several different points, according to the connections of the central vesicles—the central vesicles, in the latter instance, having the same relation to the second vesicular centre reached, that the outward vesicular expansion had to the first centre.

To take the optic nerve, for example, and trace the series of operations which may result from its action:

1. Retinal change; 2. central vesicular change at the "ori-

gin" of the optic nerve; 3 a. "Reflex" upon the iris; b. upon the lachrymal gland; c. upon the blood vessels of the eye; d. Through the gray vesicles of the central nervous ganglia (fused) of the base of the brain, and by commissural fibres to gray matter of the convolutions, etc., of the cerebrum; e. ditto. to the cerebellar vesicles; f. through various nerves, vesicles and ganglia to muscular organs; g. to secreting organs.*

From careful study upon this topic, I am inclined to the belief that the gray vesicles upon the convolutions and anfractuosities of the brain have a similar relation to the commissural fibres and central nervous vesicles (constituting the true centres of volition, sensation, etc.) that the expansions upon the optic, and other nerves of special sense, do to their commissural fibres and the same centre.

The retinal cells respond only to their own stimulus; and their lesion, or that of their fibres, or central vesicles, gives rise to the subjective phenomena of vision.

In like manner the superficial cerebral vesicles respond only to their peculiar stimulus, and lesion of them or their commissural fibres of connection, etc., gives rise to the subjective phenomena of mind.

If there is anything of mind beyond the registered impressions of sense, it finds the organs of communication with the body through these vesicles, as light comes in by the retina, and sound by the cells of the distal auditory expansion!

The force of mind once producing the vesicular change, the mechanism of its action thereafter is altogether analogous to that of physical stimuli!

In all are the commencing vesicle, the conducting fibre, and the recipient vesicle, which latter becomes the commencing vesicle of a new chain!

A correct idea of the *reflex phenomena* of mental nervous action, will explain, at once, about all of the real phenomena

*It will be noticed that in deference to common usage, I employ different terms for muscular and secreting organs, but it should be recollected that physiologically and histologically, they are homologous.

of "spiritualism," table-tipping, mesmerism, somnambulism, dreaming, etc.

Abstract metaphysics applied to psychology causes the whole thing to evaporate in subtleties; direct physiological investigation brings the whole subject to the simplest possible concrete.

I have said elsewhere that the "new principle," or "doctrine," is but a corollary from what was previously known. This is true of all discoveries by the inductive method.

It was a known fact that diseases or disturbances of the nervous centres, deranged both motion and secretion in the parts supplied from those centres.

The term functional disease was either meaningless, or it involved in many instances reflex phenomena.

The terms *centric* and *ex-centric* causes of internal disorder could find no other explanation.

The entire doctrine of "revulsion" was vague and indefinite without this transparent statement.

The structure of muscular tissue, its cell formation and relation to nervous tissue demanded this view.

The doctrine of "sympathies" was otherwise inexplicable. The discoveries in cytogenesis and histology, showing the analogy of development, nutrition, and decay of muscular and glandular organs pointed definitely to this idea.

Even though the opinion of M. Hall that muscular irritability is dependent upon the cerebro-spinal system be still entertained, there is no escape from the conclusion that the blood and fluids must be the medium of action.

In October, 1849, in the case of a gentleman on trial for homicide of his son, I gave evidence upon the question of insanity, and argued the presence of diabetes as indicative of disease of the nervous centre. The other indications, and the event, confirmed the diagnosis. (Vide Bost. Med. and Surg. Jour., Vol. 42, p. 441.) Few writers, indeed, have been found hardy enough to deny the influence of disease of the nervous centres upon secretion. The corollary is obvious, that nerves which induce changes in these nervous centres

will, secondarily, induce changes in parts receiving nervous supply from those centres.

Irritate the ulnar nerve at the elbow, and sensation is referred to the ring and little finger;—continue the irritation and actual inflammation will ensue in the parts experiencing sensation. Where is the line of demarcation between the sensory and secretory here? There is precisely the same effect in case of reflected sensation elsewhere.

Probably the largest number of cases of neuralgia are examples of what might be called excito-sensitory action.

Is there philosophical propriety in inventing the term?

The central truth is that the nerve vesicle undergoing change, induces changes in structures with which it is in connection, by conducting nerve fibres, or vesicles—the expression or form of that change depends on the structure reached.

The nerve vesicle may be primarily undergoing change, or by the medium of an incident fibre.

Letter from W. R. Marsh, A. M., M. D., Professor of Chemistry Materia Medica, and Toxicology, Medical Department of Iowa University.

KEOKUK, Iowa, August 13, 1857.

MY DEAR DOCTOR:—

Sickness at home, and the urgent pressure of other business must be my apology for delay in replying to you.

To your interrogations I reply but briefly, because opportunity is wanting for speaking more at length now, although should you wish it, I will write more fully at another time.

First. The manuscript lectures to which you refer, and from which the transcript mentioned is taken, were written by you during the summer of 1848, and publicly delivered before the class of the Indiana Medical College during the session of 1848–9.

I am positive as to the date of the writing and the delivery, and the identity of the manuscript, because I was then reading medicine under your instruction; and, as we were not merely teacher and pupil, but intimate friends, it was permitted me to peruse your lectures from day to day as you progressed with their preparation. During the session of 1848–9 I occupied the same private room with yourself, and it was my custom each evening to look over the lecture you had given during the day, for the purpose of fixing the subject more

fully in the memory, and also of correcting, if need be, my notes of the same. Hence I could not but remember, and if I failed to do so, the notes thus taken would be sufficient to revive remembrance.

Second. As to what you taught, I reply: That in addition to what you had written in explanation of your views of the *modus operandi* of escharotics and revulsives generally, you were wont to enlarge extemporaneously, appealing to analogy and known facts to sustain your position.

I may sum up your remarks, in brief, as follows:

Secretion by glandular or secernent organs is, in relation to the reflex nervous system the analogue of *motion* in muscular tissue. Both are operations of double nervous arcs. Impressions upon efferent nerves, conveyed to nerve centres, produce changes therein, thence the influence is conveyed through efferent fibres to the organ or organs in direct nervous connection (through the double arc) with the part where the first impression is made, and at the distal extremities of these efferent nerves, molecular changes are produced. These changes result in the production of motion, sensation, or secretion, just as the organ has for its proper function the one or the other. "Contiguous sympathy" may be thus explained, as also the "sympathies" of organs topographically or anatomically remote. And I remember you adduced as an argument in support of these views, the self same instances advanced by Dr. Campbell—the "*sympathies*" displayed in dentition; as also the influence of impressions made upon other parts, as the feet, mammæ, etc., upon the menstrual secretion. Here, both the motor and secretory influence were apparent accordingly as the character of the uterus assumed more or less of the office of a muscle or of a secretory organ.

The above illustrations, made by you, of your views, I give; and although imperfectly as representing the manner of your treating the subject, yet I hope they will be sufficient for your present purpose. The utmost brevity is all my time will now permit.

Third. You taught the same in the winter of 1849–50, but more fully than in the preceding course. As to your after teachings, I know nothing positively except as follows:

In the summer of 1851 or '52 you made me a visit, and while sitting in my office with me, the conversation fell upon the comparative pleasure in lecturing upon Mat. Med. or Physiology. I asked you how it fared with your two *enthusiasms*, viz: your views of the

office of the reflex system of the nerves, and the catalytic action of medicines, when you replied that you had a better opportunity in lecturing upon both branches to develop the former fully to the minds of the class, for that when upon the "excito-motor" nerves, it was easy to show how motion and secretion were analogous results of the same causes. You expressed yourself as more than ever confident of the justice of your views, and expressed some astonishment that writers upon therapeutics should have failed to notice a matter so important in a pathological sense, and as an index of therapeutic applications.

Finally, your teachings have so far influenced *my mind*, at least, as to induce me to teach the same to our classes here in my lectures upon therapeutics. To the fact that I was under your instruction from the first of my medical study, may doubtless be attributed my not noticing the fact that it was something new in physiology, although I was aware that the application of the idea, as made by you, was new, and I have so remarked in my teachings, giving you the credit.

Hoping that you may be able to prove to the satisfaction of the profession, what I have no doubt you are entitled to, the credit of being the first to arrive at and promulgate "*the idea*" although not the "designation" of the "excito-secretory" system of nerves; and that you may be ever successful in your efforts for the good of medical science, I am Sincerely yours,

WELLS R. MARSH.

Prof. J. ADAMS ALLEN, M. D., Kalamazoo, Mich.

(*To be Continued.*)

ARTICLE III.—*Mineral Waters—Their Origin and Effects.*

By HENRY ERNI, A. M., M. D.

All the water found in nature, is more or less impure—*i. e.*, more or less impregnated with gaseous and mineral matter. This is owing to the great solvent power of this fluid, which, indeed, the hardest rocks can not, for any length of time, wholly resist. Hence, our clearest river and spring water—even the rain-water—admits of no exception, since the former, passing, in its course, over various soils and rocks, acts upon

them; whilst the latter washes certain ingredients from the atmosphere. These saline parts, though popularly regarded as foreign impurities, have nevertheless an important bearing on vegetable and animal life, and hence must exert some influence on our health. The sagacious experiments of Boussingault have shown that young animals, during their growth, derive a great part of the lime necessary for the development of their bony frames, from drinking water. A young pig took up, during a three-months' trial, one third of a pound of lime into its system; and he calculated that all the cattle kept on his farm swallowed about two thousand pounds of lime, magnesia, common salt, etc., in the course of a year.

The great bulk of aquatic animals is confined, during the act of respiration, to the atmospheric air dissolved in the water, which (absorbing oxygen in a larger proportion than we find present in the atmosphere) contains from 32 to 33 per cent. of this gas—which is a proof that nitrogen and oxygen are not chemically united in the air, but uniformly mixed by the diffusive power of gases.

One volume of water absorbs, according to Saussure, about 0.046 vol. of air; and Humboldt and Guy Lussac found that distilled water, saturated with air, yields, by boiling, a gaseous mixture, containing 32.8 per cent. of oxygen. In rain-water, the amount of oxygen in the absorbed air amounts to 31 per cent.; in snow-water, 28.7; the water of the river Seine, from 29.1 to 31.9 per cent. of oxygen.

The absorption of gases by water increases with the external pressure, and with the reduction of temperature. Water, at the height of from six to eight thousand feet, retains only one-third of the quantity of air which it absorbs at the level of the sea; hence, in some of the Alpine lakes, we find no fishes.

As to water-plants, they find, in the medium in which they live, not only the necessary mineral constituents, already in a soluble form, but the carbonic acid gas diffused throughout the water, decomposing by the action of sunlight, they appropriate, as food, its carbon, whilst the oxygen is libe-

rated. There is, even under otherwise unfavorable circumstances, enough of nitrogenized matter present, to aid in the support of vegetable and animal life. Thus, exposing fresh well-water, in a bottle of white glass, to sunlight, it yields, after a while, a green sediment, a microscopical examination of which reveals the presence of convervæ and infusoria, the germs of which are never developed in the dark.

In the so called *hard waters*, we find chiefly carbonate of lime and magnesia disolved in free carbonic acid gas, which components are the cause of its peculiar taste, and its unfitness for washing—decomposing soap. In letting such waters stand at rest, but especially by boiling them (the free carbonic acid thereby escaping), the earthy materials are precipitated, or incrust the inside of our kettles and boilers. Hard waters, likewise are not suitable for certain cooking purposes, as some vegetables (peas for instance) can not be boiled soft in them. Such waters, even where mere boiling would not answer the purpose—as sea water, or water charged with gypsum—are rendered "soft" when mixed with a little caustic potash, or soda, which alkalies throw down magnesia and lime. Well-water sometimes becomes contaminated with animal and vegetable substances, as in the neigborhood of swamps, or where, by chance, it comes in contact with refuse matter near dwellings, farm yards, church yards, etc., rendering it thereby very unwholesome, and even productive of fatal disease. Hence to provide large cities with sufficient and wholesome water, constitutes one of the first and most important tasks of of their governing officers; and as the pipes in which water in such cases has to be conducted are metallic, we will say a few words in reference to some waters on metals.

The water is usually brought from a considerable distance in iron pipes, which do not, generally, in the least affect its qualities, and we may therefore limit our remarks, simply, to lead pipes, which, owing to their cheapness and flexibility—tin being too expensive—are chiefly resorted to, for conducting water through short distances. As a general rule, we find that the purer the water the more it acts upon lead.

Thus a piece of this metal dipped into distilled water becomes converted into a white pellicle of white hydrated oxide, or where the carbonic acid of the air has access, into hydro-carbonated lead. Water distilled in a copper still provided with a lead worm, or condenser, becomes quite milky from the lead it contains. We have always much to fear from well and spring water coming from alluvial or modern geological formations; whilst those containing a considerable amount of salts—such as sulphates (gypsum), phosphates, also the common limestone waters—may be passed with impunity through lead pipes, for such waters precipitate on the inside of the pipes notable quantities of incrustations, which prevent the oxidation of the lead beneath. These general remarks may not have been superfluous, since they give a better insight into the origin and nature of what are commonly called *mineral waters*, which more especially constitute the topic of the present article.

It follows from what has been said, that strictly speaking, all waters partake more or less of the nature of mineral waters, but in the more common acceptation of this term we include only such waters as contain a certain amount of saline matter. There can be no doubt that the ingredients with which waters are impregnated, render them, in many cases, highly medicinal, and applicable to the one or the other class of diseases, according to the therapeutic properties of its mineral constituents, and hence many of our mineral springs may, with great benefit, be resorted to by invalids. Mineral waters were employed for bathing purposes by the Greeks, Hebrews, and Romans. The former erected many temples in honor of springs considered healing by the power of the gods, whilst the Romans built magnificent bathing houses, the ruins of which still excite our admiration. We moreover know from existing manuscripts, comprising regulations and directions respecting mineral baths that they were pretty generally made use of in Italy in the year 1164, and somewhat later, in Germany.

In regard to temperature, springs are divided into thermal,

or warm and cold; we find the former most frequently in volcanic districts, whilst in other cases, they originate at great depths. Thermal waters vary much in temperature, from 15 to 100 deg. Thus the great *Geyser*, in Iceland, at times ejects a stream of boiling water to the height of from 30 to 100 feet. This water—owing to the presence of carbonate of soda and potassa—contains large portions of silica, which separate only, after its total evaporation. Some physicians state that thermal waters have a much greater specific gravity than common hot water, *i. e.*, such mineral waters cool down more slowly than merely common water, which, however, is not the fact. Mineral waters may, from their prevailing constituents, be classified thus:

1st. Hepatic, or sulphurous waters.

2d. Chalybeate, or feruginous.

3d. Acidulated—carbonated.

4th. Saline.

a—Common salt prevails.

b—Magnesium (bitter waters).

1st. In *Hepatic waters*—sulphur springs—free sulphide of hydrogen predominates, and there is likewise a metallic sulphide present, such as sulphide of potassium, or sulphide of calcium. Such waters when exposed to the atmosphere, separate finely divided sulphur—white sulphur springs—or coming in contact with some of the heavy metals—iron, magnesia, etc., throw down dark colored precipitates—red and black sulphur springs.

We discover the free sulphide of hydrogen, however sparingly present in the water, by boiling the latter in a flask, in the neck of which we suspend a piece of paper, previously saturated with a solution of some lead or copper salt, which turns brown or black after a while. In order to prove that some of this gas occurs in a chemical combination with some metal, we heat the water until all the free gas has escaped, when by introducing the same test paper into the liquid, the sulphur if present will darken it. The origin of such springs is pretty clearly understood—we find them coming from the beds of

rocks containing sulphates (gypsum) and much organic matter, the latter causing the decomposition of the former. Thus by bringing together in a well-closed flask a solution of sulphate of soda and sugar, we find that after some time the organic substance acts reducingly upon the sulphate, whereby carbonic acid and sulphate of sodium are formed, and by the mutual reaction of these, sulphide of hydrogen is disengaged.

2d. *Chalybeate waters* contain in general proto carbonate of iron, which is soluble in water charged with free carbonic acid. The water is colorless and transparent when fresh; but after a while a dark substance is precipitated, composed of hydrated oxide of iron, and usually mixed with carbonate of lime, or some other carbonates. Though such waters have a strong inky taste, still the amount of iron present, is, in most cases, very small.

Tests:—The water is treated with *acetic acid* (when carbonic acid is evolved, and we get in solution proto acetate of iron), and a few drops of ferro cyanide of potassium—*yellow prussiate* of potash—added. After the lapse of some time, the solution turns blue. This reaction is obtained at once with ferro cyanide of potassium—*red prussiate.* Sulpho cyanide of potassium produces a red color. A solution of galic acid, or a spirituous infusion of gall nuts, turns such water purple, or even black.

3d. *Acidulated waters* are impregnated with an excess of carbonic acid, which can hold considerable quantities of lime and magnesia in solution.

Tests:—Tinct. of litmus—when added in small quantity—turns red, from the free acid, but changes back again after some hours; boiled water does not show this change. A darker red, which does not disappear, indicates the presence of a metalic salt. The addition of lime water produces a white precipitate, if carbonic acid be present, which, when mixed with a larger quantity of the mineral water, is re-dissolved.

4th. *Salines.*—In these, chloride of sodium prevails, the amount of which varies from 1 to 23 per cent.

Tests :—Nitrate of silver produces a white, curdy precipitate, easily soluble, by an excess of ammonia. Probably all such waters also contain iodide and bromide of sodium, which are traced thus: The water must be concentrated by evaporation, some nitric acid added, and afterwards some thin starch paste, which latter is colored blue by free iodine. To detect bromine, the water must be evaporated to at least one-fourth of its bulk, when almost all of the common salt crystalizes; while in the mother liquor, remain the bromides. We now add a few drops of chlorine water, then some ether, which dissolving the free bromide, turns red. Starch is colored orange-brown by bromine.

Magnesia, or bitter waters, contain, usually, sulphate of magnesia; sometimes sulphate of soda.

Tests :—Chloride of barium produces at once a white precipitate, in any free acid. Carbonate of soda throws down carbonate of magnesia, but has no effect if sulphate of soda is present instead of a magnesian salt. To find whether the precipitate is carbonate of magnesia only, or composed both of this salt and carbonate of lime, add sulphuric acid, which re-dissolves magnesia, but not lime. Many other constituents besides those enumerated are found in mineral waters, such as lithium, barium, strontium, even tin, silver, etc., but no peculiar effect can be ascribed to these.

As soon as the sanitary effects of mineral waters were recognized, we find attempts to have been made to imitate them by artificial means, in the laboratory. Thus Pliny mentions, and gives directions, how to make artificial sea water. In the sixteenth century Thurneyssen, and in the eighteenth, Bergman and Hoffman experimented with, and *combined* synthetically, the ingredients, found in certain celebrated mineral springs. But it was not until the great reformation in Chemistry by Lavoisier took place—who, first introducing the *balance* into chemical science, gave it a mathematical basis, from which date, its history as a science begins—that mineral water could be quantitatively and correctly compounded.

The experiments of Struve led him to establish, in the year 1818 to 1820, a large hydropathic institution at Dresden, where mineral waters were prepared and consumed in various forms, and in consequence of its success, similar ones were founded at Leipzig, Berlin, Conigsberg, Hamberg, Petersberg, Moscow, Odessa, Brighton, etc.

Such chemically compounded mineral waters, must of course, qualitatively and quantitatively, be identical with the *native* ones of the same class; and since a chemist is enabled to take into account, and even prevent the escape of gasses, or the gradual decomposition of certain constituents, he has indeed, greatly the advantage over crude nature, where much is left to chance in regard to the amount of mineral material contained in the water, whilst he is provided with chemicals and refined apparatus that must insure his success and render his products constantly and invariably the same. Furthermore, it is worthy of consideration, that to visit distant mineral springs is at least very expensive, if not, in many cases, altogether impracticable for invalids. It is true that spring-water can be exported, but when long stored up, as it will happen in most cases, it becomes liable to changes, whilst even then, we have no other guaranty of having procured a genuine article than its exhorbitant price, which often gives the only passport to a ready sale.

From certain allusions and lauditory recommendations, it appears that many physicians even, but especially the laity, believe that *natural* mineral waters, differ from artificial ones, and are endowed with *peculiar* and mysterious properties and effects; for how often do we meet with newspaper advertisements and physician's testimonials, in which they speak of the great healing powers of "*nature's own combinations*," of the "*wonderful prescriptions of nature*," etc. Permit me to cite one example:

A *Professor of Chemistry*, in extolling the virtues of a chalybeate spring, in Tennessee, writes thus: "The peculiar and distinctive virtues of a mineral water, without long and repeated trials of its effects on various forms of disease, can

only be predicated upon a knowledge of the separate and combined properties of the ingredients retained in solution. But even with this knowledge, the efficacy of such 'natural combinations' would generally be underrated. Medicines in the form of powders, or concentrated solutions, will frequently pass through the alimentary passages with only partial absorption. Mineral waters are more easily introduced into the blood vessels, thence to all the minute branches of the secretory apparatus, and in this manner their ingredients may be rendered eminently active, while the same remedy, administered in another form, would be wholly inert. A long course of observation, under the most favorable circumstances, by an eminent physician—Dr. Johnson—led to the conclusion that 'saline and aperient mineral waters, will produce ten times more effect than *the identical materials* artificially combined. A grain of iron as it exists in chalybeate water is more tonic than twenty grains exhibited according to the pharmacopœia.' He continues: 'therefore the peculiar medicinal properties of a mineral water are due to the substances in solution, and especially if they possess such increased energy of action, it is certainly a matter of no small importance that an analysis should be furnished of any spring offered to the public, in order that the invalid might form some judgment of its adaptation to his case, or the physician prescribe intelligently for the particular wants of his patient.'"

Now I confess that from the tried laws of endosmosis, I can not conceive of any good reason why saline constituents in the form of mineral water should pass easier into the blood, or circulation, than when given in common solution. Have such mineral waters a different density from artificially compounded solutions? Or are the salts, acids, etc., when in "natural" solution endowed with peculiar chemical and physiological properties, differing from the same salts, and acids prepared by chemists? That solid remedial agents, powders, etc., must be capable of solution, however employed—internally or externally—in order to enter into the general circulation, is an established fact; the same is true of plants; no solids pass into the organization of vegetables.

But, for instance, is the iron in the chalybeate water, which the *Professor* examined, different from the iron in the liquid prepared by art? Or, is not the carbonic acid identical in both cases? Do not the same molecular forces come into play wherever chemical reactions take place, whether in nature or our work-shops? Or, are what we consider to be chemical facts and the laws which control them—established by men of science after laborious researches and close induction, thereby questioning nature as to the proceedings in her great laboratory—a mere fiction, instead of imperishable truth?

The assumption of Dr. Johnson that "*saline and apperient mineral water will produce ten times more effect than the identical materials artificially combined*," deserves to be regarded as a relic of by-gone ages, and indicates the fact that *imagination* guided his experiments (if he made any), instead of sober judgment.

This would, indeed, be a valuable suggestion to homœopathy, which, administering infinitessimal doses, arrived at the conclusion that, as the *quantity* of substance *decreases*, *its power increases*. Such investigators might possibly succeed in an attempt to reveal, by means of the microscope, the *position* of the several atoms constituting a chemical compound, or to trace and exhibit the animalculæ to which some epidemics—as cholera, etc.,—have been ascribed!

Speaking of mineral waters, the mischievous help-mate, "*vital power*," elsewhere so conveniently applied to cloak ignorance, can not be available, however much it may have been said that many of natures productions can not be manufactured, for within a few years many minerals have been produced by art; and the only obstacle to complete success, is a want of more powerful agencies in the production of *heat* and *pressure*.

If there was not a greater analogy between our reasoning and truth respecting *inorganic* nature, how could we ever hope to obtain a harmonious conception of the constitution of organic bodies? Experience shows that only since

the laws and modes of the combinations of inorganic chemistry have been made our guides, a true insight into the composition of those bodies which are formed under the influence of the so-called "*vital power*" has been acquired.

I believe that perhaps, in the majority of cases, mineral waters act simply as follows: When taken freely they stimulate the appetite, as common cold water would—either in the form of a drink or a bath—by withdrawing a certain amount of heat from the body, the loss of which has to be made up. Allowing, however, that mineral waters in many cases do act chemically, and in some, that their effects are different from what we might anticipate, judging from their analytical composition, may it not be attributable to an *imperfect analysis*, or an oversight, on the part of the chemist, of certain constituents, as, for instance, bromine, iodine, boracic acid, now so frequently traced?

Finally, in accounting for the *marvellous* benefit which persons derive from certain *hydropathic institutions*, we must not underrate the superior value of diet and exercise, as means of cure, nor neglect the reciprocal action of the mind on the body.

A southerner, for example, who has indulged in high living, consumed much meat and fat, surrounded by a warm, humid atmosphere—respiration being carried on languidly, combustible matter accumulates in the blood in more than due proportion, the liver is compelled to work beyond its powers in secreting bile, in consequence of which hepatic disease ensues—he visits Saratoga, and is cured; now, was it the *mineral water* that produced the curative effect? or was it not rather the change of climate, moderate exercise, a proper regimen, escaping from the monotonous home-scenes and luxurious indulgencies of a southern life?

Knoxville, Tenn., Sept. 1857.

ARTICLE IV. *Scrofulous Bubo.* By A. G. MERRETT, M. D.

"Facta non Verba."

The following case which came under my care during my recent passage from London to New York, will illustrate the importance of inquiring into the cause of a bubo, when an unfortunate presents himself with an enlarged condition of the inguinal glands.

I. Price, mariner at 28, married, fair, with every indication of a scrofulous diathesis, complained of a swelling in the groin which disabled him from walking. On examining the part, I discovered two very respectable enlargements, say three inches long, one above and the other below Ponpart's ligament, oblong in shape, of tolerable and uniform density, not very tender on pressure, skin quite natural. The patient declared he had never suffered from lues or gonorrhœa. I inquired if the cevrical glands had ever been similarly affected, to which he replied in the negative, but stated that the axillary glands had some time previously inflamed and suppurated. Upon viewing the axilla, I observed a small valvular flap of integument, under which I indulged the curiosity of passing a probe. The instrument (exploratory genius!) found its way to that point of the integument below the clavicle where the pectoralis major and deltoid enjoy an identity of origin, where, also, a fistulous outlet had evidently existed at some prior date. From the outlet of the sinus in the axilla, a trifling amount of puruloid fluid still occasionally oozed.

Now, no sooner did I thus perceive the true nature of the bubo, than the difficulty of treating the case successfully, at once occurred to me, for the preparations of iodine are generally unheard-of luxuries on board ship, as also anti-scrofulous diet; and I have long since been convinced that all attempts to discuss such tumors are equally futile with our best efforts to excite a successful (complete) destructive suppuration by local measures, when unaided with appropriate constitutional treatment.

However, from the limited armamentarium at my disposal, I selected as a discutient, the lin. ammon. fort. which was directed to be used assiduously. A smart purge was administered, total quietude enjoined, and the pot. nitr. used as an ureal eliminative. These measures failing, after several days use, to arouse the absorbents, I endeavored to prove the vaunted pyogenetic powers of repeated hot poultices. Here, again, I was baffled, but not surprised—no appreciable alteration in density occurred. The idea then suggested itself to me that some artistic and vigorous daubs with a pencil of argenti nitras might excite an inflammatory action in the integument which would involve the structures beneath. To my delight, the patient complained of increasing pain from day to day, while the part began to present indications of a respectable phlogosis, as the ancients termed it. In the course of a week, by flexing the thigh upon the trunk, and thus lessening the tension of the fasia lata, the tactus eruditus became sensible of fluctuation. I then hoped by opening up the abscesses to the influence of the air, and awakening their chronic ideas, by the aid of a pledget of lint, that complete disintegration of the glands could be effected while yet sufficient inflammation continued to erect a barrier of plastic material around the degenerating mass.*

However, the patient declined my polite overtures, on the ground that he had heard of "cords having been divided" (qurey the spermatic cord?) I therefore left him to his fate, with the comforting assurance that the pus would surely burrow, and not only undermine his abdominal and lumbar muscles, but his constitution also. A few days then elapsed, when I was informed that he was inclined to assent to my sanguinary proposals. At that time I found that all action had subsided, the area of fluctuation being surrounded by a

* NOTE.—I have seen two cases of scrofulous ulcers whose fistulous edges and spreading disposition have strongly impressed my mind with the importance of this induction—one in India, in which the anatomy of the neck was spontaneously demonstrated, in the second, in the Panama, which exposed the injured region as clearly—both the size of a saucer. True, an abscess *must* be opened, but when of a scrofulous nature, the imperative need of constitutional treatment should be borne in mind.

dense wall of deposit. I accordingly fulfilled the indication by the aid of a stout scalpel; (tickling a bubo with a lancet ought to be brought within the meaning of the act for the prevention of cruelty to animals). A dossil of lint was then inserted into each cavity, and simple water dressing applied. As might be expected, the relief afforded was only temporary. Pressure was tried, which failed to produce adhesion of the walls on the one hand, or suppurative inflammation on the other. The inclination remained, but will, we trust, be speedily removed under the influence of the following prescription.

℞ Potassii Iodidi,
Tinct. Hyoscy,
Tinct. Iodine, aa. dr. j.
Aqua Distillat. oz. xij.
Cujus capiat cochl. ij magna ter die.

To correct the anæmic condition resulting mainly from confinement in a dark forecastle, I directed him to take pil. ferri comp. gr. v. cum singulo dosi misturæ; and an aperient, pro re nata

The occurrence of other surgical complaints in the site of the inguinal glands, to wit: venereal and gonorrhœal bubo render a diferential diagnosis necessary, to say nothing of an arrest of the descent of one or both testicles, which I have actually once seen treated, in Michigan, with tr. iodine for a glandular enlargement (I beg pardon, the testicle *is* a gland); but my chief object in recording the case (which has nothing very singular about it) is to add my mite in establishing the general law of surgical pathology, which states that in proportion as the materials (elements) of a morbid growth are heterologous in their nature, the greater the absurdity of efforts at discussion. In this point the profession ought to be quite clear and decided, for if true, it robs the charlatan of his most favorite appeal to the ignorance and credulity of patients.

The late expose of the cancer ward quackery at the Middlesex Hospital, however mortifying to those in authority, has done good after all, and although it is true, the plan of Dr. Fell was enucleation by escharotics, it is in principle the same species of humbuggery with "discussion."

ARTICLE V. *Selections from Surgical Notes—Abscess of posterior chamber of Fascia Lumborum.* By Prof. GUNN.

In order to fully appreciate the peculiarities of this form of abscess, it will be necessary for the reader to recall the anatomy of the posterior abdominal fascia, or fascia lumborum. It will be remembered that this structure is composed of three layers, the anterior of which, is attached to the anterior surfaces of the roots of the transverse processes of the lumbar vertebræ, the middle, to the tips of the same processes, and the posterior, to tips of the spinous processes. All three of these layers become blended at the outer borders of the sacro-lumbalis and quadratus-lumborum muscles, so as to form two chambers, which constitute respectively the sheaths of these muscles. Between the anterior and middle layers we have quadratus-lumborum, and between the middle and posterior layers, the mass of the sacro-lumbalis, and longissimus-dorsi muscles. The middle and posterior layers, which constitute the sheath of sacro-lumbalis and longissimus-dorsi muscles, are very dense and strong. They are attached to the illiac crest below, and to the ribs above, the posterior layer extending high up the back and over-laying the longissimus-dorsi muscle. It will thus be seen that the posterior chamber is co-extensive with the length and breadth of the muscular mass, composed of the two above named muscles, for which it constitutes a sheath.

An abscess occurring within this sheath, will naturally present peculiarities, occasioned by the shape of the chamber, distance from the surface, and the unyielding nature of the tissue which forms its walls. These peculiarities consist mainly in the absence of those physical signs which usually indicate an abscess. Bound down by the posterior layer of the fascia, there is but little swelling—a mere fullness of the region, which, perhaps can only be seen by comparing the two sides. Fluctuation will be very obscure in the early stages, from the depth and small amount of pus; and in the later stages, from over distention of the sheath which constitutes the walls of the abscess. Diagnosis must be based, first,

upon those constitutional symptoms which indicate the suppurative process; and second, upon physical signs, modified as above described.

CASE I. The subject of this case was a middle aged medical man, engaged in an active country practice. He experienced on the 20th of Dec. 1850, while riding, pain in the left side, but did not give up to it, till five days later, when there was severe pain, refered to a point on the left side, about midway between the umbilicus and the anterior supsuperior spinous process of the illium, accompanied by decided febrile action. At a later period, the pain was refered to the lumbar region of the same side. I visited him during the first week in the February following, and found much emaciation, rapid and feeble pulse (120), temperature of surface variable, and dyspnœa in the recumbent posture. I learned that with subsidence of the more active stages of the febrile action, there had been rigors, which fact led me to suspect suppurative action. On examination of the side and back, I found a fullness of the lumbar region without discoloration of skin. There was obscure fluctuation, but so obscure that I did not make a positive diagnosis, though I expressed a belief that there was purulent accumulation in the sheath of the sacro-lumbalis muscle,and volunteered to introduce a bistoury. My friend declined, and I did not see him again during his sickness. In the course of four weeks, however, the nature of the disease became apparent, and the abscess was opened about two inches from the spinous row, and on a level with the twelfth rib. It discharged freely for a few days and then healed and has never troubled the patient since, though engaged in the arduous duties of a country practice.

CASE II. This case occurred in the person of a young Canadian of healthy appearance and good habits, having, from the chronic nature of the abscess, never suffered from violent constitutional disturbance. A lameness amounting to disability, attended by a slowly increasing fullness of the lumbar region upon one side, had troubled him for some months, when on the 21st day of June 1855, he presented himself to

me. There was then a diffuse swelling extending from the illiac crest up the back, overlaying the short ribs, and yielding only obscure fluctuation. The skin was natural in appearance. I introduced a bistoury and evacuated several ounces of ill-conditioned pus. A perfect recovery followed.

CASE III. This patient was under the care of the physician, who was the subject of the first record, and to his politeness I am indebted for the following notes of the case:

"Patient was a young German 22 years of age. I visited him first on the 8th of May 1857, and found him in great pain, apparently in the lower part of the left lung, or in the region of the kidney, with great difficulty of breathing and some cough, much fever and thirst, pulse 120, skin very dry and parched, and tongue coated. I examined the patient externally and found no perceptible enlargement or swelling, and no tenderness on percussion. The history which I received from the family, was, that he had been complaining some four weeks, of symptoms similar to those above described, only less severe. He had been attended most of the time by a German Quack; part of the time for pneumonia, and part of the time for something else, until he had concluded that he did not know what was the matter with his patient, and had given him up to die."

"I did not arrive at a clear diagnosis at first, but prescribed veratrum veride in full doses, with laxatives. I visited him daily and found that the veratrum in safe doses, would not reduce the pulse much below 100. Ten days subsequent to my first visit, I detected slight swelling and tenderness in the side and near the back, and diagnosed incipient abscess; continued cautious treatment, without much medication, until May 21st, when I cut very deep, (one and one half inches) for the abscess. The incision was made on a level with the last rib, about two inches from the spine, and from it thick pus was discharged for some days, after which it healed soundly without further trouble."

87 *Shelby Street.*

Bibliographical Record.

Principles of Medicine:—an Elementary view of the causes, nature, treatment, diagnosis and prognosis of Disease. With brief remarks on Hygienics or the preservation of Health. By CHARLES J. B. WILLIAMS, M. D., F. R. S. A new American edition. Philadelphia: BLANCHARD & LEA, 1857,

We regard the work, before us, as admirably adapted to sustain the "*attempt*" of the author "to place, the practice of medicine on a footing, somewhat corresponding with that of Philosophy, Chemistry and other sciences, which equally depend on the accurate observation and rational arrangement of facts."

Basing his reasonings upon extended and accurate knowledge of the actions and relations of the living economy in health, he finds himself guided to an intelligible construction and explanation of the changes, both structural and functional, which are induced by disease; hence, medicine, as a science, is analytically studied and illustrated.

Principles, that are fundamental, are deduced from anatomical and physiological knowledge of structure and function, as also, from an intimate acquaintance with the causes of disease, as well as with the agents, which the wisdom of learning and experience make available in its removal.

These principles are sought and ultimately attained through an enlarged "generalization of facts, observed in an extensive study of disease itself," and, as exemplified in "effects, manifested in the living, or in the dead body."

But a synthetical method of teaching is pursued, not less earnestly than the analytical; hence, the causes of disease are studied and displayed in their complex operations upon the organism, and finally, in the ultimate changes wrought in function and structure—all which grouped, in accordance with natural relations, "constitutes the *elementary forms of disease.*" Thus, it will be observed that *etiology*, or the study of the *causes* of disease, very properly precedes and introduces to the reader, all, of whatever character, which relates to, considers and illustrates their effects. In a word, the consideration of "disease itself," whose "nature and constitution" thus investigated and developed, composes the department of medical science which is known as "*Pathology proper.*" To this department, the work is

chiefly devoted. Other departments, however, are subordinately considered.

Among these, "such an elementary view of principles, applicable to the *treatment* of disease—technically denominated *General Therapeutics*—is introduced," as "reason and experience" have supplied.

The general phenomena of diseased action as manifest to the senses, are studied in the same analytical way and with due regard to clearly defined logical deduction. This constitutes *semiology*.

But to make the work more complete in itself, it was necessary to treat, to some extent, at least, of the division and classification of diseases--their relations and affinities as exemplified, not only in their symptoms and physiognomy, but in the destructiveness wrought in the tissues, and in the incident modifications or suspension of function. Herein, is *Nosology*.

Nor was it less imperative to trace, mark out, and explain those distinctive characteristics by which diseases are recognized and known. This is *Diagnosis*, than which, perhaps, no department of the science of medicine requires more laborious study.

And yet the work would be incomplete; it would be partial and unsatisfactory without a compendious notice of the characteristics and signs, both individually and in the aggregate, by which the results or the termination of diseases may with a *good* degree of probability be foretold. Here is *Prognosis*,—a branch of our science which involves no meager knowledge, not only of normal anatomy and physiology, but of the anormal condition of each, and comprehensive and definite views in regard to which, are intimately related, both to the reputation and personal comfort of the Physician, and to the hopes and happiness, not less than the fears and poignant affliction of those who confide in him.

It was necessary also, to consider to some extent, the rational means of preventing diseases, in order to the construction of a general system of scientific medicine, founded as the one under notice is, on sound anatomical and physiological knowledge.

In this department of the work, the reader will find an intelligent and satisfactory elucidation of *Prophylaxis* and its principal doctrines.

Finally, to finish the work, and, as intimately allied to the last mentioned branch, Dr. Williams has treated his readers to an essay on the "means, by which the structures and functions of the body

may be kept in that normal state, which conduces to their continued welfare."

This includes the principles and doctrines of *Hygienics*, a portion of medical science of vast utility to the successful practice of medicine and immensely important to the political economist.

We say important to the political economist—it is so; since it involves and strictly speaking, elucidates, confirms, and establishes or controverts and corrects all those doctrines and principles on which are based, both the past and present practices of quarantine. In short, everything that relates to the public health, not less than what the medical practitioner may consider and apply in reference to individual cases.

Thus, it will be perceived that a beautiful superstructure is reared upon the most substantial basis, that of *anatomy and physiology*.

Again, it will be observed that whilst the author has appropriated the treasures of his own large experience, both in private and hospital practice, extending now over a period of more than thirty years, to the elucidation of "the bearings of *physiology and pathology on practical medicine*," he has not in a pharisaical spirit, hesitated to lay under contribution, the labors of others, both predecessors and cotemporaries, who have been engaged in kindred investigations.

Hence, it will be found that in the exercise of a desire "to avoid perplexing the reader with much discussion or detail, *doubtful* facts and a variety of conflicting opinions have been withheld," whilst those "facts only" which are "best ascertained and the views which seem most tenable have been given."

In the preface to the first American edition, it was observed that "a work on General Pathology supplies a want in English medical literature."

The truth of this postulate, it is believed, will be readily conceded when the actual state of medical science is fully considered. True, many works are extant as the "Elements de Pathologie Generale of Chomel; the General Pathology of Stille," and the Pathological Anatomy of Horner, to which we would not forget to add the Morbid Anatomy of Baillie, all of which must be regarded as valuable contributions to professional literature.

So, likewise, the more recent productions of Rokitansky, Jones and Seiveking and that of our distinguished countryman, Dr. S. D. Gross, with others, scarcely less meritorious, are invaluable.

But between these or any of them and Dr. Williams' treatise, the reader will recognize a striking difference. Whilst they generally display with the marked accuracy, the anatomical character of diseases as exemplified in their influences, both on the fluids and the solids of the body, and of morbid products; and whilst they institute ingenious and often satisfactory explanations of the numerous changes, wrought by diseased action, they do not, nevertheless, so connect the facts, derived from pathological research with the laws and principles of therapeutics as to enable the practitioner to perceive, with tolerable clearness of vision, the relation of cause to effect, both in regard to the production and the cure of disease.

Indeed, it is this essential feature, rendering them *eminently and* "*intelligibly practicable*," which distinguishes the labors of Dr. Williams from those above referred to, and in virtue of which, they truly "supply a want in English medical literature." The *Principles of Medicine* have been in the hands of the Professional public, since 1843, and during that period no less than three English editions have been exhausted, whilst the one under notice, is the fifth that has been called for on this side of the Atlantic.

We need not dwell on the special merits of the production. To those who have made themselves familiar with its contents, it is unnecessary; to such as have not, it is sufficient to say, by way of advice, *procure it, study it and profit by it.* K.

For sale by RAYMOND & SELLECK, of this city.

The Practice of Surgery. By JAMES MILLER, F. R. S., F. R. C. S. E., Surgeon in Ordinary to the Queen for Scotland, etc., etc. Revised by the American Editor. Fourth American, from the last Edinburg Edition. Illustrated by Three Hundred and Sixty-Four Engravings on Wood. Philadelphia: BLANCHARD & LEA.

Miller's Practice of Surgery, which is really but a second volume to a complete system of surgery, the first volume comprising Miller's Principles, we have regarded as one of the best standard works of this department of medicine; and we are glad that the demand for it, calls for the fourth edition. Of the work we can only speak in terms of commendation; and of the way in which the American Editor has discharged his duty as a whole, we would also express approbation. American contributions and practices have been, generally, *fairly* incorporated—but one exception to this rule seems to claim a passing notice.

In addition to the subject of fracture of the clavicle, we have figured, Fox's apparatus, and also, that of Levis, of Philadelphia; and the editor says: "Some excellent forms of apparatus have recently been described and recommended by Dr. Frank H. Hamilton, in his able and instructive paper on deformity after fracture of the clavicle, in the transactions of the Am. Med. Assoc., Vol. 8, 1856. They may be regarded as modifications of the plan of Dr. Fox; but one of the most convenient as well as neatest improvements, appears to be the ingenious and simple contrivance of Dr. R. J. Levis, of Philadelphia, which is here represented," etc. Now this "ingenious and simple contrivance" *is certainly nothing more than a modification of Fox's apparatus; the principle is identical*, and the mode of its application is but slightly modified. A little *partial* we opine. The most effectual, and tolerable to the patient, of all apparatus, is entirely ignored. We mean the neck yoke. There is no difficulty in treating fractures of the clavicle if the patient will but lie flat upon his back till union has taken place; but this they will not do, and the great objection to most apparatus designed to keep the clavicular fragments in place, lies in its intolerable irksomeness. The neck-yoke well applied, is entirely free from this objection, and is more efficient than any other means yet employed. It is certainly not unknown, for it is extensively manufactured and sold by at least two splint makers. Why has our editor ignored it?

We repeat our expressions of commendation of the work, and of the general manner in which editorial duty has been discharged.

To be found at the House of Raymond & Selleck, in this city.

G.

A Practical Treatise on Foreign Bodies in the Air Passages. By S. D. Gross, M. D., Professor of Surgery in the University of Louisville, etc., with Illustrations. Philadelphia: Blanchard & Lea.

The class of books, to which this work belongs, is but too limited. Men investigate more thoroughly, and write more clearly upon subjects, in which they have become deeply interested, than when producing a systematic treatise upon some general department of medicine. Hence monographs possess more clearness, precision, and completeness, and are entitled to more deference, and will command more obedience, than any other class of works. And all this, is simply because concentration of force upon a single point, is more effective, than when the same power is more widely diffused. It is a good sign to see a library rich in monographs.

The work under consideration is an octavo volume of four hundred and sixty pages, comprising seventeen chapters, each devoted to a special division of the general subject. The nature of foreign bodies liable to introduction, the effects produced—immediate and remote, symptoms, diagnosis, prognosis, treatment—medical and surgical, and the difficulties attendant upon the operation, together with the topographical anatomy, are all minutely considered; and when we reflect that this is the first extensive monograph upon this subject ever published, we have reason to be thankful to its author.

We cannot devote the requisite space to an extended notice, but while we commend the work as a whole, we designate as possessing peculiar interest, all that portion which pertains to the surgical treatment proper. There is, perhaps, no operation which is more dreaded than *tracheotomy*. The class of patients who require it, the gravity of the cause which demands it, together with the uncertainty of vascular distribution, all conspire to make the operation one of the most vexatious, in the whole range of operative surgery. A treatise which fully considers these difficulties, and instructs how best to meet them, is necessarily one welcome to the surgeon. Such is the character of that portion of the work to which we now refer.

The chapters devoted to laryngotomy, tracheotomy, and laryngotracheotomy are all enriched by the detail of illustrative cases, which give additional interest to this portion of the book. G.

For sale at the House of Raymond & Selleck.

Spirit of the Medical Press.

Vaccination.—*By L. A. Smith, M. D.*, Newark, N. J.—I have recently looked over the proceedings of the late meeting of the Medical Society of New Jersey, and the interesting address of the President on re-vaccination, and have amused myself in jotting down my own experience, which I send you.

I was vaccinated in 1810, and had a moderately sore arm, from which matter was taken to vaccinate others. My first exposure to small pox was, as far as I know, about twelve years after, when I had commenced the practice of medicine, and from this I escaped. At that time I vaccinated my first child, and re-vaccinated my wife and myself. With me the virus

took but little effect, and soon passed off. My wife had a pustule not unlike other vaccine pustules at first, but more readily forming a scab, which was gradually enlarged to the size of a shilling, and was a long time in healing. This effect I have often noticed since, in other patients, She was vaccinated when an infant, in the year 1802, by the late Dr. Abram Clark, of this city, and, I have heard the doctor say, was the first person vaccinated in this State; and that he obtained the virus from Dr. Benj. Waterhouse, of Cambridge. My child, vaccinated at the same time with myself and wife, had the kine-pock perfectly, as did several other children, proving the purity of the virus. Two years afterward, having occasion to vaccinate my second child, I re-vaccinated all the members of my family. The infant took the disease and passed regularly through it. All the rest of us escaped with a slight local inflammation for a few days. I pursued this course in my family at intervals of two to four years, till all of my children, six in number, had passed the ordeal, and all, in my opinion, were secure against small-pox. Some of them had small pustules, and in one instance a bad sore, which was long in healing. To prove that the vaccination has not worn out, I have only to state, that I am very frequently attending small-pox, and that my son, the second in the list above mentioned, has been seven years in the practice of medicine, and has been often exposed to small-pox in its most virulent form, among the poor of the city, as Ward Physician, and we have both escaped.

That vaccination disarms small-pox of its virulence, reducing it to the mildest form of varioloid, even after the contagion is in the system, has been verified in my experience in no less than four instances. In all of them, I knew the patients must have been thus exposed for some days, one six, and by vaccination they all passed safely through the disease with but little fever and short confinement, and fewer pustules than I have ever seen in any other case of varioloid.

From my experience thus stated, in part, I have formed the following opinions:—

1st. That a *perfect* vaccination affords a *perfect* protection from small-pox, during life, and that if this be done in *all instances* soon after birth, small-pox may be *eradicated*, as Dr. Jenner supposed it would be.

2d. That in many subjects *one* vaccination is sufficient to eradicate the susceptibility to the small-pox, while in others two and *sometimes more* are required, and therefore it is important to re-vaccinate as long as an impression can be made. This in families can be done, as it was in my own, as new members are added to their number.

3d. The vaccination will protect the life, and greatly mitigate the distress of a patient who has already taken the small pox, if done in time to allow the first disease to pervade the system.

4th. That the common idea that the sorer the arm, from vaccination, the

better the protection, is a mistake, and that a very small pustule which goes through the regular stages and produces a constitutional effect about the ninth day, is more generally *perfect* than one that produces great inflammation, pain and swelling of the limb, and affecting the glands. Indeed, I am always suspicious of a case where this has occurred, and take an early opportunity to re-vaccinate, and have often had my suspicions verified by a good pustule.

5th. That the virus should always be taken before the areola forms, if taken from the pustule, and with great caution, as it does, in some instances, interfere with its progress. My own practice has been to save the scab and insert it in a pulverized form, by means of Fancher's Vaccinator, which is a very convenient instrument, and saves much time, and never produces unnecessary inflammation.

6th. That the virus should never be taken from any but healthy infants of healthy parents, and then there is little danger of propagating any other disease, as many think may be and often is done.

7th. That eruptions often occur after the most careful vaccination, and are owing to some peculiar idiosyncrasy, although the friends of the patient believe that it was owing to the virus. Hence the importance of the last rule, which may save the physician from blame.

8th. That a small scar, with pits or indentations around its border, is a much better evidence of the perfectness of vaccination, than a large, smooth and glossy one, though many think that the bigger the scar the better the vaccination.

9th. In re-vaccinating a patient who has a good scar, if the matter produce inflammation and itching for a few days and then dry up, I infer that the first vaccination was *perfect.* If it do not produce any other effect than is common to a slightly abraided surface, I infer that the virus is not good, and immediately make another attempt with a new supply.

I could illustrate all these opinions, by reference to cases under my own experience of 36 years, were it worth my while to write, or yours to print them. In this time I have vaccinated many thousands, and have been a careful and interested observer, and have yet to hear of the first instance of any case of varioloid or small-pox in a person vaccinated by me satisfactorily, except the four already mentioned; and if these crude thoughts assist any of the junior members of the profession in their search after the better way, I shall be more than satisfied.—*Med. and Surg. Reporter.*

[Translated for the Boston Medical and Surgical Journal from the *Gazette des Hospitaux.*]

Chlorate of Potash in Pseudo-Membranous Angina and Croup.—Every day supplies us with new examples of the efficacy of the *chlorate of potash* in pseudo-membranous affections of the mouth. Dr. Garassa, of Calais, informs us that since the month of November, 1856, he has had occasion several times to employ this medicine, and that in two of the most grave diseases of this description, pseudo-membranous angina and croup, he has obtained the most satisfactory results; out of twelve cases, he writes us, he has had twelve cures.

The Calais physician has, moreover, ascertained, as was announced by M. Isambert in his monograph on this subject, that the chlorate of potash is perfectly harmless in its effects on the digestive organs. Taken in the dose of from fifteen grains to five drachms, it produced no disturbance, as he observed in experimenting upon himself. After taking five drachms of the salt in twenty-four hours, the only phenomena which he experienced were a tolerably adundant salivation, and a strong saltish taste. Young patients to whom he gave it, took as much as from three to four drachms daily, and in two instances only he observed it to cause vomiting of brief duration. In another case the catamenia were suddenly suppressed in a young girl of sixteen years; she had taken two and a half drachms of chlorate of potash for some patches of false membrane on the tonsils and anterior surface of the soft palate. The chlorate of potash was always given in solution with sweetened barley-water, in the proportion of from one to two drachms of the salt to twelve or sixteen ounces of the vehicle; this was taken without repugnance by the children, and as much of it as they would take was given them during the first twenty-four hours of the disease.

The doses prescribed were from two to four drachms daily for subjects between the ages of eight and twelve; from one and a half to two and a half drachms for those between three and eight years; the quantity of the salt being gradually reduced to one drachm daily. Each patient averaged between five and seven and a half drachms of the chlorate during the course of the disease. The cure was complete from the twelfth to the fifteenth day. The false membranes were detached generally in twenty-four or thirty-six hours; the fever then diminished, and the respiration became more free. Emetics were then given, which, by the mechanical action of the vomiting, appeared to aid materially the separation and expulsion of the lymph.

In the twelve cases treated by M. Garasse, cauterization with the nitrate of silver was only employed once; this agent appearing to counteract the operation of the chlorate. So long as the false membranes were visible, the medicine was continued, and was not omitted until they had completely disappeared. Insufflations of calcined alum were then ordered, as an application to the bright red patches which were to be seen in the places

occupied by the false membranes. One or two foot-baths, with mustard, were ordered daily, and one patient had sinapisms applied to the legs. It has been remarked that the chlorate of potash seemed to dissolve the false membranes. M. Garasse has not observed this fact; it has always appeared to him that they preserved the same thickness which they had at the time when the treatment was begun.

The following observation is offered as a specimen of those which have been transmitted to us by M. Garasse.

Achille L., aged 11 years, of a miserable constitution, having a luxation of the left thigh of long standing, with caries and abscess, was attacked, March 2d, 1857, with pseudo-membranous angina. There was intense fever, pulse at 140, the cervical glands were swollen, respiration difficult, deglutition almost impossible. the soft palate, tonsils, anterior pillars, and cavity of the pharynx, were covered with a thick layer of false membrane. There was occasional cough, but no symptoms referrible to the larynx or bronchi.

Treatment.—Three drachms of chlorate of potash in barley-water sweetened with honey, to be drunk as freely as possible. In the evening, the child was in the same condition.

On the 3d, the pulse was at 120; cervical glands still swollen; respration rather more easy; the membranes still remain. Chlorate of potash, drachms ijss. in twelve ounces of vehicle.

4th—During the night the child spit out several membranous strips. The false membranes are separating; pulse 100; cervical glands less swollen and less painful; respiration easy. Chlorate of potash, oz. iss.; sweetened barley-water, oz. x.

5th—Evident improvement; pulse 100. The soft palate, left tonsil and a part of the pharynx are free from lymph. Chlorate of potash, oz. i., to barley-water, oz. x.

6th.—Respiration normal; pulse 80; the false membranes have disappeared, the parts which they covered being of a bright red color. Gargle of salution of alum, chicken broth, wine of quinine.

7th—The child asks for food; pulse 70. Same treatment.

12th—Complete recovery.

We take this opportunity to call attention to a pharmaceutical preparation which M. Detham, apothecary, of Paris, has invented, to facilitate, the administration of this medicine to children, It consists in combining the chlorate of potash, in the proportion of one-fifth part, with sugar, and making it into lozenges, according to the following formula:—sugar, in powder, 800 parts; chlorate of potash, 200 parts; gum tragacanth, aromatic water, aa q. s. Having made these ingredients into a homogenous mass, it is to be divided into lozenges of about ten grains, each containing three or four grains of the salt. We think this preparation will be found useful.—*Boston Med. and Surg. Journal.*

Editorial and Miscellany.

VERITAS ET JUSTITIA, SINE TIMORE.

The Clinical Course in the University. — The clinical course in the University, established by the Regents at their Spring meeting, commenced on the twenty-sixth of June, and closed on the twenty-seventh of August; consequently, it had a duration of two months. The number of students in attendance was nine. Of these, seven remained through the whole two months—one, a graduate, left at the end of the first month; and one, a novice, was admitted at the middle of the term.

In our August number we gave expression to the belief that a desire to pursue the most pacific course, had led the Regents to adopt a plan, utterly inadequate to the demands of the profession, the age, and the absolute wants of the Medical Department. The above statement of the number who availed themselves of the advantages offered, and of the time devoted to this important branch of instruction, fully substantiates the position which we then assumed; and we propose now to consider, somewhat in detail, the demands and the wants to which we then alluded, leaving the reader to compare therewith, the facilities afforded by the clinical course in the University, which has lately closed. In doing this, we disclaim all intention to reflect upon, either the Board of Regents, or the Professors, who officiated in carrying out the plan adopted. On the contrary, we would rather become the advocate of both. The Board of Regents, though deeply anxious to supply an acknowledged want, upon the eve of retirement, would hardly desire to take so important a step, as the only alternative to the plan adopted, presented; and the failure of the course, resulted from an utter inadequateness of the plan, and not from any fault of the gentlemen engaged in conducting it. Our desire is to extend the benefits, and increase the usefulness of the University. Our dearest aspirations are entwined with its interests and prosperity, and we would advocate no plan, that we did not *know* would redound to the increase of both.

The wants of the student call for the means of *observing* the phenomena of disease, and the application of remedial measures, *before he passes from under the supervision of his instructors*, and the demands of professional sentiment are, that these means shall be

supplied. HUMAN LIFE IS THE TRUST, *and no one is fitted to receive it, till he has become familiar with the phenomena it presents in its varied conditions of health and disease.* For the acquirement of this familiarity, *time, and opportunity for observation* are required. We have before said that the Hospitals of this country did not realize the full degree of benefit of which they are capable; and we now express the conviction that they never will afford such realization, until thorough (both as to time and mode) clinical instruction becomes a REQUISITE for graduation. The time devoted to this branch of instruction should be, *not less than one year.* The three principal branches of practical medicine should be fully represented, viz: surgery, practical medicine, and obstetrics.

A hospital can accommodate, for purposes of clinical instruction, without detriment to the patients, as many students as its average number of inmates: for instance, an institution with an average number of one hundred patients, can afford thorough, practical instruction for one hundred students. All this, too, without noise, confusion, or injury to the sick. Furthermore, this number can be better instructed than the few now are, by the commonly practiced plan. No bed should be surrounded by more than four students; and thus, each of these four would have ample opportunity for careful observation. No student should be permitted to study, to exceed four cases of disease at a time; these he should study thoroughly, with note book in hand, and be required to investigate authorities on the particular diseases under observation.

The working of a plan thus systematized, would be exceedingly simple. As the physician enters a ward, the students would also quietly enter, and each betake himself to the bed of the patient, whose case he is first to examine. As the physician approaches a bed, accompanied by the house physician, the four students would have already preceded him—and now, it will be seen, that six persons only surround the bed. Attention being called to the several points of importance and interest, observation and record of these, and the treatment adopted, are made by the students; and as the physician passes on to another bed, a portion of the four, present at the bedside of the first patient, would change places also. Thus, without tumult or confusion, all would have an opportunity, fully to investigate, each, four cases of disease per diem. Time would thus, also, be afforded for ample investigation of authorities, and comparison with the

observations made at the bedside. In addition to this, attendance in the operating theatre, and upon the examinations of, and prescriptions for, out patients, conducted before the whole class, with attention to post mortem examinations as opportunity offered, would complete the curriculum of the hospital course, and afford the means of qualifying students *safely* to assume the *practical duties*, as well as honors of the doctorate.

In a previous number, we spoke of a division of labor in carrying out a system of clinical instruction. Argument is unnecessary on this point. It is a very compassable thing, to educate one's self up to the *practical* point, in all the branches of medicine; but it would require Herculean strength and labor to qualify one for *teaching* as extensively. In division of labor there is a degree of efficiency, attainable by no other means. Concentration of effort begets strength, and ensures accomplishment. Surgery, practice of medicine, and obstetrics should all be represented, and each, *by a devotee*. Instruction would thus be earnest, forcible, and convincing.

We have said that attendance upon clinical instruction should be one of the *requisites* for graduation. With the members of our profession generally, we believe that this position will be readily admitted to be correct. We do not allude to it, therefore, for argument sake, but with the view of applying it to the practical working of the plan which we have sketched. About twenty-five per cent. of a medical class, usually become candidates for graduation; thus, in a class of two hundred, fifty would, therefore, be compelled to enter upon the hospital course. Add to this number, twenty-five per cent. for those who would voluntarily avail themselves of the advantages afforded by a two years clinical course, and we have sixty-three only, out of a class of two hundred, who would require hospital accommodations, a number very far short of the maximum capacity of even a small hospital. By this sketch, will be seen the correctness of our assertion in a previous number, that a tithe of the advantages to be derived from medical charities, were not yet realized by the hospitals of this country.

In medical schools properly located, *i. e.*, in commercial cities, this plan of thorough elementary and *practical* instruction, affording a *complete* medical education, can be most fully realized; and it is needless to say, that its *saving influence* upon health and life, would

be incalculable. Let thorough clinical training, then, become a REQUISITE for the *Doctor's* degree; and let not the University of Michigan be backward in assuming this high toned and honorable position. G.

ABOLITION OF FEES.—The Trustees of the Medical Department of the University of Iowa have abolished all Fees, save that of $10 for matriculation, $5 for demonstration, and $30 for graduation.

This is the second free Medical Institution in the North-West. We have always hoped and believed that such institutions would accomplish great good. Our life has been devoted to free education. We would that every State in the Union would make generous provision for the free education of her entire people.

Inquiry has been made of us, Whether finally the South-West will not find it to her interest to make similar provisions? Whether some Southern University, handsomely endowed, should not set the Southern States (known to be slow in these matters) an example for instance, first of free professional education; Divinity, Law and Medicine, and finally extend it to the Undergraduate Department. We believe the scheme entirely practicable, and would esteem it glory enough to devote the remainder of our life to the developing of such a consummation. But the Trustees would have to yield all power over the Medical Department except that which would enable the Faculty to introduce men or measures not approved of by first class Medical Colleges. And this the Trustees of the University of Nashville did before we would agree to accept our present position in it.—*Nashville Journal of Med. and Surg.*

There is a class of men, who always seem to be on the right side of leading questions, and who speak out without fear, or being influenced by associations or connections, which sometimes seem to warp the judgment and control the actions of less independent men. Our heart goes out towards such men—and such a man seems to be Dr. Bowling. Zealous and outspoken, the above quotation is characteristic of the man. A professor in the Medical Department of the University of Nashville—a school pre-eminently successful, and supporting its professors from ticket fees,—he "would esteem it glory enough to devote the remainder of his life to developing" a FREE SCHOOL.

As early as 1836, immediately upon coming into possession of the land bestowed by the General Government, the Legislature of Michigan framed and enacted the organic law of the University, providing for the organization of its several departments upon a *free*

basis. The College of Arts and Sciences went into full operation in 1841, and has yearly graduated classes to the present time. The College of Medicine and Surgery was organized in 1849, and assembled its first class (numbering 91) in October, 1850; and considering its country location, destitute of clinical advantages, its success has been great. It leads, at present, country schools. To Michigan then, is due the credit of acting the pioneer in a plan of *free University education*, the like of which the editor of the Nashville Journal, a professor in an eminently-successful city school, would fain see established in the University of Nashville. The University of Iowa is the second on the list of free schools. Success to her, and to her well-wishers. G.

Organship. — The *Iowa Medical Journal*, in a complimentary notice of the *Independent* and the late changes in its editorial corps, says:

"But our wonder is, at the same time, slightly excited by this last change, for it is somewhat notorious that the '*Independent*' has for a considerable time been engaged in a sharp controversy with the '*Peninsular Journal*,' the latter, the organ of the Faculty of the University of Michigan, among whom Prof. Gunn occupies a place. There has been not a little *sharp shooting* from both sides, and so far as we could judge, the '*Independent*' has never come out second best We thought, upon seeing Prof. G.'s name upon the cover of the '*Independent*,' that resort had been had to the ordinary custom in *military* practice—turning captured *guns* upon the enemy from whom they were taken—and we opened the book rather expecting some *home shots.* But we were mistaken, and found the gun had been christened 'Peace Maker.' Henceforth, we opine, the war is ended; but we do not know if we are hereafter to look upon both journals as organs of the medical department of the Michigan University."

Whether we shall deserve the honorable title of "Peace Maker," the future alone will determine. We engaged, with our editorial colleague—the originator and proprietor of the "*Independent*"—in its management, uninfluenced by individuals or combinations, and unknown to any save those immediately interested in the change. There was no "diplomacy" on our part, and certainly none on the part of the "Peninsular;" for to that journal, the change was unknown, till fully consummated. A path of usefulness opened itself before us, and we felt inclined to enter upon it.

With regard to "organship," the Medical Faculty of the Univer-

sity of Michigan has possessed no organ—its wants have never required such an instrument; and whatever may have appeared like "organship" to that body, in any journal, was entirely gratitous and assumed. The "*Independent*" is the organ of no school, faction, or clique. We have no admiration for "organship," and cannot consent to submit to its restricting influence. We edit an *independent* medical journal, and devote it to the cause of science and truth; we know of no higher mission in the whole range of our profession, and we can consent to serve in none less elevated in its aim.

For the kind feelings expressed by our brethren of the *Iowa Journal*, we are most grateful, and beg to assure them of a full reciprocation. G.

Since writing the above, the *Medical and Surgical Reporter* has come to hand, with its *advice* relative to the Detroit Medical Journals and the University of Michigan. We refer its editor to the above, for an answer. G.

Death of Marshall Hall.—Death, that most unsparing of tyrants, has exacted from the greatest physiologist of the age, the last debt of nature. Slowly, surely, and relentlessly, disease has been undermining the earthly tabernacle of a mind which, for vast powers, high purposes, and indomitable energy, has found no superior in its native land for the last half century. On Thursday last, August 11th, Dr. Marshall Hall died at Brighton, aged 67 years. It is believed that his death was caused by exhaustion produced by a stricture of the œsophagus, of many years standing, accompanied, latterly, according to the opinion of many eminent surgeons, with malignant ulceration of the part.—*London Lancet.*

Why?—Rhadamena palmata and Laminaria saccharina, two species of Algae, which are frequently used as food by the inhabitants of Iceland, impregnate the body of each consumer with two or three pounds of Iodine every year; nevertheless no Iodism appears, nor scrophulosis, or rhachitis either.

Schmidt's Yahrbuecher.

Iodine Oil. — Ricord and Musset, in Paris, prescribe against scrophulous bubo and periostitis, a solution of 50 centigrames iodine

in 100 gram. olive oil, and give 20,–120 grm. per die. They consider it more efficatious than oleum jecoris asselli. *Ibid.*

Spongia Fluviatilis.—Pulverized with vinegar and water as a rubefacient, operates quickly and powerfully, mixed with oil cajeput or turpentine, to be rubbed on the abdomen in cholera. If the passages are very frequent, add some tincture of opium. Against the spasms, to be rubbed on the spine. If used in the first stages of cholera, this disease is reported never to make progress.(?) *Ibid.*

Phosphorus.—Phosphor, gr. ij., ol. terebinth. drachms iij., every hour 15 drops in a mucilage, against intermittent fever of robust persons of the lower classes, is recently considered a more reliable remedy than quinine or Peruvian bark. *Ibid.*

Although already recommended by eminent physicians of the last century in those cases of intermittent fevers, which always recur, phosphorus became obsolete as an antiperiodic, and is used only in paralysis, old rheumatic affections, in cases of neuralgia, and sometimes in typhus, but its great effect upon the ganglia and the cerebro-spinal system, and its diaphoretic properties, entitle it to a fair trial. We recommend it to the readers of the *Medical Indepndent.*

E. D.

Spasmus Glottidis has been cured many times in children by

R. Moschi
Acid. tannic. aa gr. 1-4,—ss.
M. F. pulv. *Ibid.*

Sugar Coated Preparations.—We invite the attention of the readers of the *Independent* to the advertisement of F. A. Reichard on the third page of the cover. The pills and granules which are there advertized are completely enveloped by a sacharine coating, covering entirely the taste of the medicine. The only objection to them, which can possibly be suggested, is the resemblance of the granules to homœeopathic pellets. But the similarity ends with the physical appearance, for the actual remedy contained within the coating will be recognized by medical men as among the *Sampsons* of materia medica. Messrs. Higby & Stearns dispense these medicines, and fill wholesale orders.

THE

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EDITED BY

MOSES GUNN, A. M., M. D.,

PROFESSOR OF SURGERY IN THE UNIVERSITY OF MICHIGAN,

AND

L. G. ROBINSON, M. D.

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THE
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Original Communications.

ARTICLE I. *Mechanism of Nervous Action.* By J. ADAMS ALLEN, A. M., M. D., Formerly Professor of Therap., Mat. Med. and Juris. in the Indiana Medical College; and late Professor of Physiology and Pathology, and acting Prof. of Mat. Med. in the University of Michigan.

It is all-important, in our investigations of the nervous system, to have exact and scientific ideas of the particular points at issue. Neglect of this prime requisite, led the enemies of Marshall Hall, through the *British and Foreign Medical Review* and the *Edinburgh Medical Journal*, to utterly confound the "mathematical" generalizations of that great man—whose recent loss the whole medical world deplores—with the loose speculations of Prochaska.

Prochaska ingeniously accounted for certain pathological phenomena—coughing, sneezing, vomiting, &c.—by reference to reflex nervous action; but nowhere seperates the movements thus produced, from those resulting from sensation and volition, and nowhere includes the great physiological motions in his explanations.

Marshall Hall himself sums up his real objects as follows:

"1st. To separate the reflex actions from any movements resulting from sensation and volition.

"2nd. To trace these actions to an acknowledged source or principle of action in the animal economy,—the *vis nervosa* of Haller—acting according to *newly-discovered laws.*

"3rd. To limit these actions to the true spinal marrow, with its appropriate *incident and reflex nerves*, exclusively of the cerebral and ganglionic systems.

"4th. To apply the principle of action involved in these facts to *physiology*—viz: to the physiology of *all* the acts of exclusion, of ingestion, of retention and of *expulsion*, in the animal frame.

"Finally, it is to these objects, taken as a *whole* or as a system, that I prefer my claim; and I do not pretend that an occasional remark may not have been incidentally made by some previous writer, bearing upon some one or more of them."

Thus far, until the recent announcement of the excito-secretory system, went Marshall Hall, and *no farther.* An advance upon the doctrine of the "true spinal" system, was made by Todd and Bowman (*vide* Physiol. Anat., p. 288, American edition), and is thus announced:

"It is assumed that all spinal and encephalic nerves, of whatever function, are implanted in the gray matter of the segments of the cerebro-spinal centre, with which they are severally connected, and do not pass beyond them. The segments are connected with each other through the continuity of the gray matter from one to another, and through the medium of commisural fibres which pass between them. Through these means, motor or sensitive impulses are propagated from segment to segment; and a stimulus conveyed to any segment from the periphery, may either simultaneously affect the brain and cause a sensation, or be reflected upon the motor nerves of that segment, and stimulate their muscles to contract."

Nowhere do they speak of nutrition or secretion being influenced by reflex nervous action, except as incidentally and *secondarily* to *motor* effects.

It is a little singular to notice the observations of writers thus confused by faulty appreciation of the real *modus operandi* of the nervous mechanism. Thus, Pereira (Mat. Med.,

vol. I, p 163, 1852, American edition), speaking of the operation of medicines by nervous agency, says:

"The mode of action of those which act through the true spinal system, is excited and reflex; that is, an impression is made on, and carried by the incident excitor nerves to the nervous centre, which, by its peculiar power, affects a remote part through the medium of its *reflex* motor *nerves.* The mode of operation of those agents which act through the ganglionic system, is excited, and, perhaps, may also be reflex."

Prof. Paine says (*vide* Mat. Med., p. 10, 1848):

"All curative agents operate upon the morbid properties either directly or through sympathy."

And again:

"Remedial agents operate directly upon the vital properties of the parts to which they are applied, and, through the medium of those parts, upon remote organs, by the *principle of sympathy.* The partial absorption of certain remedies, is only a contingent result, and has little or no agency in the physiological phenomena."

Sympathy, in physiology, pathology and therapeutics, occupies precisely the position of *phlogiston* in chemistry, and they may equally be considered as expressing scientific principles—of one kind at least.

It is quite a different thing to express definitely the precise law of action in all cases, from merely indicating facts incidental to the given law.

Thus, the *modus operandi* of an epispastic in pneumonia or enteritis, or the relation of irritation of the fauces to the muscles engaged in the act of vomiting, or the connection between the process of dentition and derangement of intestinal secretion, or the sequence of an internal inflammation upon an external burn,—may severally be sufficiently explained, to some minds, by vague invocation of nervous action or "sympathy."

But, assuredly, when the phenomena are found to come regularly within the line of physiological laws, and the full relation of the particular organs is understood, the subject is infinitely more satisfactory to the philosophical mind.

And thus, again, advancing boldly another step towards the primary simplicity of nature's operations, when we find that the varied phenomena of motion, sensation, nutrition and secretion—and even beyond this, of perception and intellection, of *conscious* and *unconscious* mental action,—are provided for by a simple arrangement, reducible to the dynamic cell and conducting fibre—is not this an advance of which a whole country might boast?

But what is the practical import of all this?—it may be inquired.

Without further comment, the inquiry might be dismissed by saying, that the mechanic might as well ask what is the use of understanding the construction of the machinery, the derangements of which it is his duty to rectify.

What is the use of any discovery? First, that immediately therefrom spring utilities; second, that it furnishes a stand-point for new discoveries, whence utilities shall hang, "not singly, as before, but in knots and clusters."

Let us indicate a few from this one:

It explains the true relation between spasmodic and true Croup.

It explains the frequent concurrence of disordered secretion and spasmodic contraction; pain and inflammation in the same part and from the same cause.

It explains the vague term, *functional* derangement, by substituting tangible phenomena.

It explains the general phenomena of *revulsion.*

It explains the relation of neuralgia to material (textural) changes and disorders.

It explains the *automatic* action of mental faculties, heretofore, by loose speculatists, supposed to be evidences of "spiritual" or "mesmeric" influences, external to the body. It thus includes the phenomena of dreaming, somnambulism, insanity, the "magnetic" or "medium" state, the "unconscious cerebration" of Carpenter, and, in fine, a multitude of phenomena, mental and sensational, never heretofore reducible to scientific series.

It explains the *modus operandi* of a vast number of morbific causes producing diseases of parts remote from their application, directly or by the blood. And so, also, of remedial influences.

Truly, as I remarked in my first public lecture on this important subject, "here is the science for a life's pursuit, though the rest of the medical course be blotted from the record."

"And here allow me to say, that the doctrine under consideration does not resolve occult problems by the introduction of new or unparalleled forces. Whilst it shows that the reflex phenomena of secretory and sensitory (and, indeed, of higher mental) actions are "analogous" to the "excito-motory" of Marshall Hall, it shows, by a bolder generalization, that ALL are reducible to a series more obviously analogous to certain well-known physical operations.

The actual physical changes, at the extremity of a nerve conductor, are productive of changes at its other extremity, also of a physical character. The nature of the change is determined by the structure in which that change takes place.

Is there anything more strange in this, than in the electro-galvanic circuit? The *modus-operandi* of conduction is obscure, and, indeed, unknown—the same is true with the connecting wires of a galvanic battery. There is no more propriety in introducing the agency of a "nervous fluid," than of an electric or galvanic fluid. The term "polarity," in either case, is well enough—but, pray, what does it explain?

In speculating upon this point, I have ever been forced to fall back upon the now well-understood doctrine of the correlation of physical and vital forces, and thus find a basis of argument in the original nature of *force* itself, manifesting itself by different phases, according to the material through which it acts. Space and time will prevent my following out the thought here, but, for the vindication of my own somewhat chequered career as a professional teacher, I may

say, that I indulged in private thought and public remark upon this point, early in 1848—long before Grove or Carpenter brought the subject prominently before the profession.

May I indicate, here, that, between the doctrines of Catalysis, Correlation of Forces and the Reflex Mechanism Nervous Action, there are points of contact, which will develop many a clue to the labyrinth of the sciences of Life and Mind, Disease and Health.

Once more, let me beg that the profession, especially the thinking part, may not confound mere vague ideas of nervous action, sympathy, &c., with the clear, scientific basis afforded by the reduction of reflex phenomena to the changes induced in the organic cells and fluids, by propagated influences from other changing cells and fluids—not by any newly-invented laws, but by simple, scientific statement of positive facts—rendered simple by their analogy to well-known physical facts.

Postscript.—Whilst these pages are passing through the press, I beg leave to add a few words, called for by a note received from my learned and excellent friend, N. D. Stebbins, M. D., of Detroit. By him, I am informed that Prof. Paine, of New York, will institute a claim in this matter, antedating Marshall Hall, Prof. Campbell and myself.

Premising that I have never read any work by Prof. Paine, or ever, directly or indirectly, received any clue to the doctrines under consideration from him, except in so far as they may have been suggested in his "Materia Medica and Therapeutics" (published in 1848), from which extracts are given in the foregoing article—I may here say, that, if that work developes his principles, it must be clear, to any philosophical mind, that he comes far short of the definite idea involved.

His doctrines, therein set forth,—and so far as I am able to gather them, at present, from others; not having his works at hand,—bear about the same relation to these, that Hippocrates' crude hypothesis did to the discovery of Harvey, or

that the speculations of Whytt and Prochaska do to the clear expositions of Marshall Hall.

It would appear that the National Medical Association was not extensive enough to contain a single individual who could rise in his place and protest against the recognition of Prof. Campbell's claim to priority of Marshall Hall, in favor of Prof. Paine.

There was not a medical journal in the United States, but rejoiced in the acknowledgment of Dr. Campbell's claim by Marshall Hall—there was not one that raised the veriest whisper of Prof Paine's prior discovery.

Dr. D. F. Condie, in his bibliographical notice of Prof. Campbell's monograph (*vide* Amer. Jour. Med. Sci., July, 1857, p. 177), strangely enough, ignores Prof. Paine and his prior claim.

The English part, at least, of Europe, stand surprised at the magnanimity of Marshall Hall, in adjudicating priority to Dr. Campbell; but—notwithstanding Prof. Paine is an honorary member of half the learned societies of the Old World, and his books adorn the shelves of all lovers of the "Curiosities of Medical Literature"—neither England nor the Continent affords a single voice to cry "hands off" to Prof. Campbell, when he stretches forth his digits for the laurels belonging to Prof. Paine!

At the present time, I know of no writer who attributes these doctrines to Prof. Paine. Why is this? Are medical men so oblivious, that, when principles are clearly stated, they cannot apprehend them? Or are medical book-makers so jealous of their discoveries, that they wrap them up in such a guise that, when the discovery is made, like the prophecies of the Pythonic oracle, their involved sentences may be translated to mean something to the point.

It is one thing to make propositions so general as to include *some* truth with a great deal of error—and quite another thing to lay down a principle which contains the truth in its exactness, and nothing else. Oversight of this single proposition may make the sweeping generalizations of

Prof. Paine appear, to some minds, as containing the gist of the recent discoveries; but as well might we say that the "intelligent principle," of Stahl's hypothesis, included the wonderful discoveries of Bell and Hall.

It is easy for a voluminous book-writer—who bases *all* physiological, pathological and therapeutic actions of the system upon the baldest vitalism, and rejects utterly all reduction of the phenomena of animal life to the category of physical actions,—to say that he recognizes, and has recognized, "reflex nervous agency"—meanwhile incessantly inculcating the idea of an abstract, recondite, unparalleled "nervous power" (which no human definition or conception can separate from the *anima vitæ* of old hypothesis), and an equally abstract, recondite and unparalleled "sensibility," altogether removed from the sphere of our investigations.

I need not take up the time or space of the journal, by reiterating that the discoveries, now under discussion, have nothing in common with the obsolete solidism of that school of medical philosophers, of which Prof. Paine has the honor of being the last, the greatest and solitary exponent. "Solidism" was always verbose, and overpowered reader and listener with a display of scholastic subtlety. Studiously rejecting every advance, it clung to the effete dogmata of past ages, and crammed margin after margin of ponderous volumes with citations of sentences, either meaningless in themselves, or capable of any interpretation.

The true doctrines of the "Mechanism of Nervous Action," are not the mere *detritus* of old Solidism or Vitalism. They are consistent only with what we may call the modified Humoralism, now generally received by the profession. So far from standing opposed to the application of organic chemistry and collateral sciences to the explanation of physiological and therapeutical phenomena, they reduce these latter to subordination to those sciences, in as striking a degree as electro-magnetism is subordinate to the science of Inorganic Chemistry.

So far from explaining (or rather, cutting the Gordian

knot of,) vital phenomena by the *vis insita* and occult "vital properties,"—the action of medicines by a similar invocation of unknown powers, and so on *ad infinitum*, as is the custom of the Prof. Paine school of vitalists,—all these phenomena are comprehended in one grand system of natural science, and are rendered cognizable by experimental methods.

The changes in the cells and fluids at one end of a conducting nerve fibre, whether produced by causes within the body or external to it, are manifested by a change in the cells and fluids at the other extremity of the fibre, in a manner altogether analogous (but by no means identical) with the changes at the respective extremities of the wire of a battery. What is there in this destructive of Organic Chemistry and Humoralism? What is there in it akin to the foggy vitalism of the old "sympathies"—*always* admitted to occur through the nerves?

The new doctrines are, in effect, a complete triumph of Organic Chemistry and Humoralism over the vague and dreamy speculations of metaphysical vitalists, and he who cannot see this, *either does not understand the subject*, or *shouts to hide his own confusion of ideas*, as the Chinese do, to hide a defeat.

Meanwhile, let me urge the attention of the profession, not so much upon the point, Who fathers the idea? as upon the more important question, Is the idea correct?—at all events, what is it?

(*To be Continued.*)

ARTICLE II. *The Rights of Authors.* By MARTYN PAINE, A. M., M. D., Prof. of Gen. Therapeutics and Mat. Med. in the University of New York.

[The Editors of the *Medical Independent* will much oblige Dr. Paine by inserting in the journal the following extract from an *Appendix* to his "*Institutes of Medicine*," which is now in the press.]

Upon all questions of priority that concern the advance-

ment of Science and Art, there is, doubtless, a general understanding that the principle should not only be sacredly observed, but that, whenever violated, there should be a common effort to repair the injury. This is alike due to the individual, to the principle, and to the common good. Nor is it less the privilege of the individual, who may have good reason to think that the principle has not been extended to himself, to vindicate his rights, and to appeal to that sympathy which forms the bond of union among honorable men. It is a common cause, and not seldom demands protection.

The author of these Institutes (and it will soon appear that he acted wisely) has sometimes thought it expedient to assert his claim of originality, in advance, to many doctrines promulgated in the work; as, for example, all that is most essential in the application of the nervous power, or reflex action of the nervous system to pathology, and therapeutics, and so much of what is most important in the natural state of the functions. This may be readily seen by consulting p. 106, § 222 *b*, p. 107–116, § 225–234, p. 295, § 476 *a*, p. 318, § 493 *d*, p. 321, § 496–497, p. 323–340, § 500–514, p. 465–467, § 714–719, p. 506, § 803–804, p. 515–516, § 819 *b*, p. 661–663, § 894–896, p. 666–676, § 902 *b*–904, p. 679–680, § 905, *a*, p. 690–691, § 906 *g*, p. 693–695, § 917–923, p. 698, § 931–935, p. 703–711, § 940–952, p. 746, § 990 1-2 *b*, etc., where all the subjects relate to the reflex action of the nervous system, and present the nervous power as an important vital agent in the various processes of organic and animal life, in the production of disease, in the operation of remedies, in all the results of bloodletting, in the changes which take place in the secreted and excreted products—having also originally set forth the agency of the nervous power in voluntary motion (Index I., Article, *Will*), and as this power is the efficient cause of the modifications of organic results under the influence of mental emotions (Index I., Article, *Mental Emotions*, and references at p. 867, § 1067). Indeed, as the reader will have seen, the foregoing doctrines relative to the reflex action of the nervous power, operating as a vital *stimulus*, or vital *depressant*, or

vital *alterative*, as it may be modified in its nature by one cause or another (§ 107–109, 227–230, p, 661–662, § 894 *b*), pervade this work. The same doctrines are at the foundation of the author's "*Medical and Physiological Commentaries*," published in 1840, while the present work was published in 1847. In the mean time he has also labored to inculcate them throughout his course of medical lectures in the University of New York—first on the institutes of medicine and materia medica from the year 1841 to 1850, and subsequently, to the present time (1857), on general therapeutics and materia medica.

It may be worth saying, also, that the author preserves the term "sympathy," though always meaning by it, as he strictly defines, reflex action of the nervous system, and this whether he employs the term "remote sympathy" or "contiguous sympathy." The elements of sympathy, as set forth in the work, are the *nervous power* and *sensibility*. All this will be readily seen by reference to Index I. Also, among other general remarks of a similar import, the author has the following:

"Notwithstanding all the laws of sympathy that are necessary to the full interpretation of the remote effects of morbific and remedial agents are as well established as any laws in physics, *they have not been applied to these important objects;* but, on the contrary, those philosophers who have contributed most to their critical exposition, *overlook their pathological and therapeutical bearings, and cling to the doctrines of humoralism and of the operation of remedies by absorption; nor have they applied, in the least, the nervous power in a philosophical manner to an explanation of the natural phenomena of sympathy* (p. 111, § 234 *a*).

When the foregoing works were first published, it was in the midst of a universal prevalence of the chemical and physical doctrines of life and disease, and the author stood alone in the field of vital physiology, and in the application of the reflex action of the nervous system in resolving the great problems in physiology, pathology, and therapeutics. A few,

however, had the quick sagacity to see its importance as presented by the author; and since the decline of organic chemistry began, others have entered upon the inquiry, and the most zealous have promulgated as original with themselves many of the doctrines which belong to the author of these Institutes, especially such as are relative to the nervous system. But the author has relied upon his professional brethren for ultimate justice: "*Ultimum et unicum remedium.*" "*Jus aliquando dormitur, moritur nunquam.*"

But the author has lately seen so great an indisposition, in certain quarters, to allow him any credit for his labors, that he has concluded to make this expostulation, which refers, particularly, to the following dispute about the authorship of matters in which neither of the gentlemen has any interest, but the writer alone of these Institutes. This rival claim appears in an article published by J. ADAMS ALLEN, A. M., M. D., in the "*Medical Independent*" for September, 1857, p. 381, Detroit, Michigan. Thus:

"It appears from a late number of the *London Lancet* that M. Hall, (Marshall Hall) recognizes, to a certain extent, the priority of Dr. Campbell. His words are these:

"'I arrive at this conclusion: the idea and the designation of an excito-*secretory* action belongs to Dr. Campbell, and his details are limited to pathology and observation. The elaborate experimental demonstration of reflex excito-secretory action is the result of the experimental labors of M. Claude Bernard. My own claim is of a very different character, and I renounce every other. It consists in the vast *generalization* of excito-motory action throughout the system. I trust Dr. Campbell will be satisfied with my adjudication. There is in the excito-secretory function as applied to pathology, an ample field of inquiry for his life's career, and it is indisputably —HIS OWN. He first detected it, gave it its designation, and saw its vast importance.'"

Dr. ALLEN then continues:

"M. Hall thus far freely and fully admits the priority of Dr. Campbell, and the latter gentleman bases his claim upon

the date, May, 1850. I shall undertake to show that this same doctrine was FIRST publicly announced and illustrated in my lectures at the Indiana Medical College, in November, 1848, and thenceforth continuously during the continuance of my public teaching before the several classes of that College, and also the medical classes of the University of Michigan until my connection with that Institution 'expired by limitation' in 1854. My own manuscript containing this doctrine was written in May or June, 1848,"—that is to say, *more than one year after the publication of these Institutes.*

"What I do claim *is the great generalization that the excito-influence is followed by a reflex change in which the effect is* NOT A MOTION *but* A MODIFICATION OF VASCULAR AND NUTRIENT ACTION. *That this effect takes place* BY MEANS OF THE DOUBLE NERVOUS ARC. A vast number of therapeutic phenomena are thus explained." [As the reader will find, very extensively, in many chapters of this work, particularly in those upon REMEDIAL ACTION, THERAPEUTICS, COUNTER-IRRITATION, CATHARTICS, ETC.—Dr. A.'s capitals and italics].

Now the whole of the foregoing doctrine is impressed upon the *Medical and Physiological Commentaries*, and upon half of the pages of these Institutes, and has been always taught extensively in the author's lectures since 1841.

Dr. ALLEN claims, also, the application of the principle to therapeutics, and remarks that "in my course upon 'general therapeutics' the subject of 'counter-irritation' came under review," and concludes that "the impression MUST BE *transmitted to the nervous centres, and thence reflected to the affected organ. In other words, the influence is primarily exerted upon the cerebro-spinal system, and secondarily upon the internal affected organ.* This is the gist of the whole matter, and the point consists in the recognition of reflex cerebro-spinal action, which, in the instances adduced, give rise to a *molecular* or *integral* change in the inflamed tissue, and not a muscular contraction. The oral elaboration of this principle was suggested by an idea [?] which does not even now appear to have occurred to either M. Hall or Dr. Campbell,

viz: *The motor effect is merely* SECONDARY, *and not a necessry part of the action of the nervous arc.*"

Here, also, the whole of the foregoing doctrine appears throughout these institutes. But they embrace a long chapter particularly upon "*counter-irritation*," in which it will be seen that the author has employed nearly the foregoing language of Dr. ALLEN, especially at pages 646, 647, § 893 *e*, and with great elaboration and extensive application of the doctrine throughout the work; which had been also antecedently taught in his lectures for seven consecutive years before Dr. ALLEN promulgated the same views.

To show still farther this partiality for the Author's writings, or his lectures (then familiar to his large classes of students), he will quote from Dr. ALLEN the following conclusions, which he also places in capitals:

"THE EFFECT IS MOTORY, IF CONTRACTILE FIBRE BE PRESENT.

"THE EFFECT IS SECRETORY, IF SECRETORY ORGANS BE SUPPLIED.

"THE EFFECT IS SENSATION, IF SENSITIVE NEURINE BE REACHED.

"THE EFFECT IS PERCEPTION, OR INTELLECTION, IF THE ORGAN THEREOF BE IN CONNECTION WITH THE REFLEX NERVE."

"*The effect produced, then, depends upon the* STRUCTURE AND CONDITION *of the organ reached.*"

"This influence *is* NOT *confined to mere increase of action*, as the term EXCITOR might perhaps suggest. The reverse may take place—the excitor may rather become the *depressor*. It would be as correct to say the depressor-motory, the depressor-secretory, as to say the excitor-*idem*."

Now the author of these Institutes not only dwells emphatically upon the *depressing* and *sedative* influence of reflex nervous action, according to the nature of the remote causes and special conditions of disease (p. 107–111, § 226–233 3-4, p. 507, § 806, p. 661–662, § 894–895, p. 671–672, § 904 *a*, p. 735, § 978, and *references* in § 1067 *a*, *b*, as to *mental emotions*, and in many other places), and upon its operation according to the natural structure and special vital constitution of organs, and their varying conditions (p. 59, § 129 *g–i*, p. 61–69, § 132–156, p. 73, § 163, p. 109, § 229, p. 111, § 233 3-4, p. 285, §

555 *d–f*, p. 313, § 487 *h*, p. 353–362, § 525–529, p. 374–383, § 576–584, p. 415–417, § 649, p. 418, § 651 *b*, p. 421–423, § 657–658, p. 523, § 827 *c*, p. 542, § 854 *bb*, p. 613, § 892 1-2 *b*, p. 644–650, § 893 *c–i*, p. 665–672, § 902–903 *b*, p. 746, § 990 1-2 *b*, and the numerous references in those sections); but the Author represents, also, the reflex action as variously *alterative* in organic life, and this imputed attribute pervades the author's writings. He enforces, everywhere, the doctrine that the reflex action of the nervous power is the modifying cause through which all the changes are effected by morbific and remedial agents in parts that are not immediately connected with the direct seat of their action; and, farther, that the principle is precisely the same when the nervous power is brought into operation by *direct* influences upon the nervous centres (as in the case of their diseases, or when the passions operate, or as the will determines voluntary motion), as it is when it is brought into operation in that indirect manner known as reflex action.

Indeed, every one of the foregoing doctrines, in all their particularities, as quoted from the American claimant, are taught, at great extent, in the volume before us, as may be readily seen by consulting the references made in this protest, and, more extensively, Index I., Articles STRUCTURE, NERVOUS POWER, SENSATION, SENSIBILITY, SYMPATHY, ORGANIC FUNCTIONS, REMEDIAL ACTION, MIND, MENTAL EMOTIONS, WILL. "*Si quæris monumentum, circumspice.*" It may appear superfluous, however, to have made these specific references in an article connected with the work itself; but it is done to encourage those readers who might not otherwise be inclined to ascertain the facts.

But the writer is more interested with the European claimants, of whom he has felt that he has much more reason to complain.

> "Omne animi vitium tanto conspectus in se
> Crimen habet, quanto major, qui peccat, habetur."—JUVENAL.

That the author's physiological and medical writings were generally known in Europe many years before the period at

which "Dr. Campbell bases his claim" (1850), is evident from the distinguished honors to which they had led in that country before that period—that from the Medical Society of Prussia as early as 1842—that from the Medical Society of Leipsic in 1843; and the "Medical and Physiological Commentaries" (of 1840) were published simultaneously in London and New York; and as to the United States, the *Commentaries* were early distributed throughout the land, and his *Institutes of Medicine* more than a year, also, before Dr. A.'s lectures were delivered; and the Author's lectures at the University, which form the groundwork of his Institutes, had been listened to annually by medical students from all quarters of the Union since the year 1841. In 1848 the Author applied the doctrine of reflex nervous action to a physiological demonstration of the substantiative existence of the soul and instinctive principle, which was then published in pamphlet form, and in 1849 the work was extended and assumed the shape of a book, and is now incorporated, in its essential parts, in these Institutes.

Nor is this all; for the whole of this doctrine of reflex nervous action, and of the operation of the nervous power as an *alterative*, an *excitant of the secretions* and of vascular action (both direct and reflex), a *depressant* and *sedative* (according to the nature of exciting causes), and the *great immediate cause of diseases and their cure*—variously modifying organic actions—was set forth extensively and circumstantially in an "*Essay on the* MODUS OPERANDI OF REMEDIES" in 1842, of which the Author distributed, at that time, a large number of copies in London, and addressed four thousand copies to physicians throughout the United States. The Author not only sent a copy of the work to Dr. Hall, but dedicated it to him (along with Prof. J. Muller and Dr. A. P. W. Philip), in connection with an "*Essay on the Philosophy of Vitality;*" and he may add that he controverted, in the former essay, doctrines of Dr. Hall (in "*Memoir on Diseases and Derangements of the Nervous System*, 1841") which were in direct opposition to those which are now in question

(also, p. 296–297, § 476 1-2 *b*). These Essays were subsequently bound up in the third volume of the "*Medical and Physiological Commentaries*," where the former may be readily consulted. But Dr. Philip had fully deduced from his experiments the *sedative* as well as *exciting* influence of the nervous system upon vascular action before Dr. Hall's experiments were made (§ 492).

As to M. Bernard, his experiments bearing upon the connection of the nerves with the functions of secretion, however much they may have been varied and multiplied, were anticipated long before by those of A. W. P. Philip, which are quoted extensively in these Institutes (p. 290–321), and towards which Dr. Hall had no friendly disposition (p. 306–308, and where the writer has controverted his views). The merit of originality which belongs to the present writer, in relation to these experiments, consists in their extensive application in illustrating the functions of the nervous power as a vital agent, profoundly interested not only as an "excito-secretory" power, and a modifying cause of all secreted products, nutrition, etc., when diverted from their natural standard, but in deducing from them a universal agency of the reflex action of the nervous system, though "the double nervous arc," in the production and cure of disease, and by which he labored to explode the chemical and physical doctrines as early as 1840. But, that the writer may not be misapprehended, he will say that he endeavored to established the fact that secretion in animals, as in plants, is conducted by powers implanted in every part, but that it is constantly influenced physiologically, pathologically, and therapeutically, by reflex action of the nervous system.

The writer is very sensible that unaccountable coincidences often present themselves in the development of new thoughts, and in the discovery of hidden things, especially where enduring reputation may be won. "*Ubi mel, ibi apes.*"—"*Uno tiene la fama, y otro carda la lana.*" But the reader, with these Institutes before him, will quickly find that much that is claimed by Dr. Hall, and all that he has granted

to Dr. Campbell, in the foregoing quotation, and, therefore, all that Dr. Allen appropriates to himself,* abounds in this volume, and, in fact, constitutes the life and soul ("zoe kai psuche") of the work, as it does, also, of the "*Commentaries,*" and of the Essay on the "*Modus Operandi of Remedies;*" nor can the reader fail of the conclusion that, were Dr. Hall's "adjudication," and Dr. Allen's after-thought, founded in any justice, and were not the claimants themselves the obnoxious parties, the present writer would have been long ago convicted by them and by others of arrogant assurance and the grossest plagiarisms. Nevertheless, the Author is most happy to find that his solitary position is becoming relieved, and that a practical direction has been given to his labors by others which cannot fail of carrying forward the great doctrines at which he has toiled, and against manifold obstacles, during his professional life.

NEW YORK, Sept. 1857.

ARTICLE III.—*Practical Suggestions, No. IV.* By J. ADAMS ALLEN, A. M., M. D., &c.

Alcohol, Delirium Tremens, &c.—Much interest has been excited, of late, by disclosures which have been made with reference to adulteration of the various preparations of alcohol. An array of drugs of formidable potency has been drawn up before our startled vision, fearful in nomenclature as the labels upon the beautiful little bottles of sugar-plums wherewithal our Homœopathic cousins have wrought wondrous works, never equalled since the days of the renowned knight, De La Mancha.

All this is very well, provided the public mind is thereby influenced to discountenance and discontinue the use of the *vehicle* of these poisonous dilutions. One thing has been gained, at least—the tippling public are now willing to admit

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* "Unus utrique
Error; sed variis illudit partibus."—HORACE.

that all the dire evils, portrayed so eloquently by advocates of tee-totalism, do result from imbibing adulterated brandy, rum, whisky *et id genus omne*; but will not allow that they result from *pure* liquors. All are ready to sing,

Nunc est libendum!

over "warranted-free-from-adulteration" alcoholic potations. Whether it is worth while to risk the loss of this advance, by insisting, as we believe, that the real poison is the alcohol itself, and not merely the infinitesimal dilution of poisonons flavoring ingredients,—moral causists may determine. In a scientific point of view, I beg leave to recall the minds of the profession to the common-sense dictum, that the effect of all the various alcoholic liquors is due to the alcohol, and in very insignificant proportion, if at all, to the alleged poisonous adulterations.

Of all the analyses which have been made, I have seen none which show the presence of foreign noxious matters, in such an amount as to bear comparison, for a moment, with the active effect of the alcohol. Take, for instance, strychnia, which, perhaps, has made the most noise in connection, especially with "Old Bourbon." A manufacturer informs me that this drug is put into the yeast "to strengthen it"—in other words, to favor the more full conversion of the saccharine matter of the grain to alcohol. It is not strange, that the slops, containing this yeast, should kill the hogs and cattle which are fed upon them, or kill the fishes in the rivers into which they are emptied. But, assuredly, chemical analysis will show that scarcely a vestige of the drug passes through the deadly "worm of the still."

Strychnia and arsenious acid, fusel oil and prussic acid, kreosote and oil of vitriol, sound most diabolically as connected with "fire-water;" but it is well to recollect that these are the merest shadows in the drink. The great dragon, whose poisonous breath blasts the physical and mental constitution of the unfortunate inebriate, is the

The physiological and pathological actions of this substance are, fortunately, well known to the profession, and need not here be rehearsed. That it belongs to the class of nutrient substances, is clear enough, notwithstanding noisy declamation to the contrary. Physiolgically, it is calorifacient, and, furthermore, convertible to the fatty matter of adipose and nervous tissue.

Taken into the system, under certain circumstances, it will favor the enriching of the blood with red corpuscles, as heretofore explained when speaking of the uses of fat. Thus, it both becomes invigorating and promotes a healthy corpulence. This effect is too well known to require argument or further proofs. Under other conditions, however, the opposite effect will be produced—emaciation of adipose and nervous tissues will ensue, and

"The life of all the blood be touched corruptibly."

In one case, it proves sanative—in the other, poisonous.

Popular notions of the radical difference between poisons, medicines and nutrients, have had too much influence on the professional mind. An untimely beefsteak may cause an untimely death—a laudable dose of arsenic may prove decidedly wholesome. Whilst admitting the occasional nutritive and even salutiferous qualities of alcoholic compounds, it is exceedingly important to bear in mind their ready noxious powers.

The aboriginal name, "fire-water," is exceedingly well-chosen and instructive. For, as the system of man requires a certain amount of heat for its healthy action and continuance, so does the actual cautery at once "reduce it to first principles." And thus, while the elements of alcohol may prove useful under appropriate circumstances, it should no more be used in the summer-time of health, than should elemental fire. Careful observation upon this point inclines me to the opinion that when the alcoholic beverage manifests a cerebral stimulant impression, in the slightest perceptible degree, its nutrient and salutiferous effects have been passed,

and it must be ranked among medicines or poisons. Every medical practitioner must have noticed that, in small doses, it is readily digested, but that the blood is speedily surcharged, and all subsequent excitation results in depression. Largely diluted, or thoroughly commingled with the food, considerable quantities may be administered with no appreciable local or general, nervous or cerebral disturbance. In concentrated form, it speedily generates each of these.

The practical inference is, that, when, from therapeutic considerations, it is deemed necessary to administer this most potent drug, it should be given in small doses, either largely diluted or thoroughly mixed with food. Moreover, the dose should ever be fixed just below the point of cerebral excitation.

The direct tendency of alcohol is to produce inflammation of the organs to which it is applied—prominently the stomach and liver. Ordinarily, from the mode of use, this assumes the chronic form, and the secondary effect is impaired nutrition—involving, as we might expect, particularly the blood, adipose and nervous tissues.

Delirium Tremens is the *typical result.* Nothing is more fallacious than the claim that this disease is the result of withdrawing a habitual stimulus—for the majority, thus affected, come under our notice with breaths reeking with the fumes of alcohol. It more clearly resembles the delirum of inanition, than that from any other cause. The sensation of hunger appears to be mainly due to the required sustenance of animal heat. Alcoholic drinks control this sensation to a great extent. The primary stimulating impression, it is true, often augments the desire for food, but the secondary effect is to lessen it. Or, again, the beverage begets local disease and prevents digestion. Thus, in each of these ways, actual starvation of the organs is involved. The mode in which the stimulant is taken determines very accurately the resulting effect. Taken in a very dilute form, as in ale, beer and light wines, or commingled with the elements of food, it will never beget delirium tremens.

The true Yankee and the mercurial Irishman are more subject to the disease, by far, than the Englishman or the Continental European. It is a national characteristic of John Bull to grow mellow *after* filling his stomach with "the roast beef of old England." Beer and wine fill up the measure of continental felicity; but the Yankee, almost invariably, pours down his undiluted Cognac or Bourbon in hasty gulps, to pacifiy the demands of an appetite he has not time to satisfy; and the Irishman drowns his recollections of the far-away Green Isle, and his present absence of culinary comforts, with repeated draughts of domestic "mountain dew."

The practical inference is simply this: that, even though we may not dissuade our unfortunate patient from his cups, we may so regulate even his excesses, that he will be little liable to this, his great horror. Tell him to cultivate the acquaintance of the cook *before* that of the bar-tender. Dilute (and here infinitesimally, all the better) the stimulant, so that lesion and disorder will not occur.

If the appetite fails, then is the time to see the physician, who must anticipate the paroxysm as he would an ague. The rules of treatment are simply those of dyspepsia, or of acute or chronic disease of the digestive organs.

Mercurial and other alteratives, counter-irritants, and even venesection, may be required. Mark, that the great point is to restore digestion and appetite—and, in nine cases out of ten, eliminating agents are the thing. Calomel, blue mass and aloes, among the cathartics, and and acetat. potassæ among the diuretics, are, perhaps, the best. Then follow with simple tonics, like cold infusion of cort. prun. Virgin. or quassia and camomile—or, perhaps, the old mixture of augustura and sem. juniperi, mineral tonics, iodide of iron, bismuth, &c., of course may be useful at times. Above all, don't think, when the patient is about again after a paroxysm, that he is well, any more than he would be in the intermission of ague.

The treatment of the paroxysm, of course, must vary

according to both commemorative and present symptoms. Sleep is indicated, but as a sign of remission, not as an evidence of cure. A sufficient degree of elimination and nutrition must be secured. Depuration may take place without assistance, and so may nutrition of the nervous apparatus, as every physiologist can explain. It is all-important to discriminate when and how much to interfere.

The threatened paroxysm may often be avoided by the use of simple anti-irritants and laxatives. Thus the nervous excitement will frequently succumb to a simple pill like this: R. Ext. hyoscy. (opt.) gm. assafœt., aa gr. ij.; sapon. venet., gr. j. M. Repeated every hour or two p. r. n., and then fifteen grains of blue mass at bed-time, followed by the senna draught in the morning. Or the quieting agent may be of a more stimulating character, as liq. anod. Hoffm., morph. acet. and mist. camph.; or, again, a mixture of laudanum, comp. spts. æther, tinct. assafœt. and c. spts. lavender; or tinct. camph.; or of chloric ether in comp. tinct. of cardamoms. But none of these things should be relied upon, except for sustaining the system till depuration takes place. When the grave paroxysm has already come on, it may often be relieved speedily by a full dose of calomel and Dover's powder—say gr. xij. of the latter to gr. xv. of the former. This is all the stomach will ordinarily bear. Larger doses of opium are rarely well borne, and other preparations of this drug scarcely have so pleasant an influence. Emetics, in the writer's experience, are too apt to get up an irritable stomach, a complication more to be dreaded than any other. The profound sedative influence of tart. antim. and similar agents, if it can be secured without emesis, however, favors much the absorption of alterative medicines and the functional action of the excretives. When this latter fails, as is manifested by the dry tongue and skin, by the cessation of healthy discharge from ulcers, if present, or the dry and angry appearance of accidental abrasions, the prognosis is exceedingly grave. Secretion must be re-established, or the patient will die, Neither alcohol nor opium will do it,

homœopathy will fail, and assimilative "expectancy" likewise. Support is imperative, and calomel a duty. Concentrated beef tea inside, and an epispastic outside the stomach, are good remedies. The constant inclination to vomit will not infrequently be relieved by minute doses of prussic acid in syrup. morph. acet., or syr. creosote and morphine. Neither here nor elsewhere, has the writer any confidence in the effervescing draught for this purpose.

Some cases will occur in which nothing will control the difficulty but raw spirits in large doses. And this is the only instance where this is good practice. Forcing sleep by it, is simply analogous to "breaking up" pneumonia with a red pepper or brandy sweat. You *may* do it, but if not, *cavete!* Opium—ditto; chloroform—ditto; *alii*—ditto. It is a trite medical truth, that many diseases are critically resolved in sleep, and this is the case here very frequently. But *the paroxysm will return more speedily and be more difficult of control* unless sleep has been solicited, not compelled.

The homely Scotch Æsculapius remarked, "There are twa things, Sir Astley, to be aver kepit in min'; to keep faith in Gode, for hereafter, and to keep the booels open, which'll do for here." But after all, something more is necessary. The delirium may be prolonged from actual inanition. Starvation is to be guarded against, as well as proper medication provided for. Practitioners complain of difficulty in inducing patients to take nutriment, but the writer is inclined to believe this less difficult than ordinarily supposed. The patient can be readily persuaded by a good nurse, or physician of moderate shrewdness. Fall in with the current of his ideas and have tact enough to direct them. Take medicine with him, drink with him, eat with him, and pretend to sleep with him. This may fail for some time, but by proper tactics will before long succeed. The writer has scarcely ever failed in this management. Oyster soup, rich animal jellies and broths, and essence of beef, are preferable. Or egg-nogg, or wine sangaree. *Feed the patient with something nutritious, and keep up secretion*—the whole in a nutshell. And when

he sleeps, don't let him sleep finally. The pulse is to be watched and the strength supported by nutriment, dilute spirits, wines, &c. Prevent any recurring paroxysm by the regimen and treatment heretofore spoken of.

Once more, I wish to recall the attention of the profession to the dictum, that all the therapeutic uses of alcohol, which are desirable, may be obtained without any sensible cerebro-stimulant influence—that direful influence which deranges the whole mechanism of mental and physical action; which reduces the will to a mere servitor of the automatic nervous apparatus. The apologist for the use of these beverages, always seeks the exhilarant influence—delirium tremens grown enchanting by the distance, which, alas, is too surely traversed by many.

The trembling fingers and aching head of the morning, after an evening excess, are but the initiatory scenes of the *typical* result of persistent indulgence in ardent spirits "warranted-free-from-all-adulteration!" Truly, we may say of such liquor:

Non est vitiosum, sed vitium!

Kalamazoo, October, 1857.

ARTICLE IV. *Remarks on a Case of Lithotomy, Read before the St. Joseph Medical Society, at its October meeting*, 1857. By D. B. VAN TUYL.

On the 7th of April, 1856, I operated on Mr. J. L. for urinary calculi, a majority of the members of this Society being present. But I have deferred making any remarks on the case, in order to be enabled, by the lapse of time, to estimate more fully the value of the operation to the patient. For I had good reasons for believing, at the time, that the disease might soon return, and render a second, and perhaps repeated operation necessary.

The case of Mr. L. is one which, in its history, illustrates most forcibly the great importance of correct diagnosis; and seems to remind us, that, without this invaluable guide, the

most skillful physician must necessarily fail in medication; while, with it, one of ordinary acquirements may, and probably will, meet with fair success.

For more than a quarter of a century it has been known and demonstrated that *excessive and long continued exercise of any particular set of muscles will cause inflammation of the bony tissue to which such muscles have their attachments;* and that such inflammation of bone may result in hypertrophy, caries, or necrosis, with a train of concomitant ills, such as human *flesh* is seldom heir to.

I believe this theory was first promulgated by Prof. Syme, of Edinburgh, and he has reported a number of cases in its corroboration.

But the common error with our profession has been, and continues to be, the mistaking of such cases for rheumatism. A person subjects himself, for a time, to fatiguing exercise, and soon after experiences a difficulty in the use of a certain muscle, or set of muscles, his case is pronounced rheumatism, and he is treated accordingly. If he happen to fall into the hands of a physician who regards rheumatism as an inflammatory affection, and is bled, blistered, and put upon a general course of antiphlogistic treatment, he will be benefitted, perhaps cured. But if his physician happens to be one of that class who look upon rheumatism as a disease *sui generis*, and for which he has a never-failing specific, such a physician may expend the full force of his remedy on the patient, and then abandon the case with his faith in his specific, strengthened by the consoling maxim that *exceptions* prove the rule. But I will proceed with the case under consideration.

A few weeks since I requested Mr. L. to furnish me with a brief history of his case, to the the time when he placed himself under my care. This he did in writing, as follows:

"In the fall of 1835 I was twenty years of age, and in perfect health. I ran a distance of five miles; became very much heated; took a violent cold, and was laid up with rheumatism in my right hip for six weeks, and then did not fully recover

from it. Soon after this, it began to hurt me to pass my urine, and I was swelled at times across the lower part of my abdomen, and was troubled almost constantly, more or less, with rheumatism. In the fall of 1838, I walked twenty miles in one day—very slippery, bad walking—three miles of the distance over cakes of ice. That brought on a violent fit of sickness, which laid me up for six months. A sore broke out on either side of my abdomen, low down; one ran for three years, the other thirteen years. In the year 1851, before the last sore healed up, I took two pieces of bone out of it. In the spring of 1848 I had a violent attack of rheumatism in my left hip and thigh; and a bunch half the size of a hen's egg came on the inside of my left thigh, about four inches down from my body. It remained there till the spring of 1849, when it began to swell and be badly inflamed; and on the 28th of June I opened it. It ran freely, and the next fall I took two pieces of bone out of it. In the spring of 1850 I was confined to my bed, and was very sick for one year. I was under the care of a physician the whole time. No one thought I could recover. In the fall of 1850 the physician took a large piece of bone out of the same opening in my thigh, and in the spring of 1851 I took out another piece.

"From the time the doctor removed the large piece of bone, the urine began to pass out by that opening. It would sometimes pass by the opening; sometimes by the natural way; and sometimes by both ways at once. And this continued so till after I was operated on in the spring of 1856.

"During all this time, it felt to me as though there was a chestnut burr inside of me, pricking and tearing me every time I moved, or anything bore against me."

Here we have a few of the mere *points* of a case, the details of which would fill a volume.

At the time Mr. L. came under my care, his case was truly distressing, and for several weeks before the operation, life had become a burthen to him. He seldom rested more than an hour at a time, and that only when he was under the influence of opiates.

Here we have the case of a man, who, from his own account, has suffered with the worst forms of rheumatism for more than twenty years. But, *in reality*, it is not probable that he has ever been affected with that disease in the slightest degree.

Mr. L. is a man of five feet and six inches in height, with an average weight of only one hundred and twenty-eight pounds; but he is a man of great muscular strength. When he was twenty years of age, he supposed he was the strongest man, *of his weight*, in New England. His muscular power, therefore, was eqeal to the task of running five miles, or perhaps a much greater distance. But the bones which were required to sustain the shock of the repeated contractions of those muscles which are most powerfully exercised in running, were not equal to their part of the performance. The parts to which those muscles were attached became inflamed to a degree which gave the disease the *appearance* of rheumatism; and what the result would have been had he not exposed himself to the excessive fatigue of that twenty mile walk, can only be conjectured. But that additional irritation hastened the work of destruction. The inflammation, which had been of a sub-acute character, at once became active and violent, and exfoliation of the anterior processes of both ossa illii, also a part of the tuberosity and ramus of the left ischium, and a part of the descending ramus of the left pubic bone, was the result.

The sores on the lower part of the abdomen, as we learn, continued to discharge, one three, the other thirteen years; but as soon as the last piece of bone was extruded, the ulcer healed. The cicatrices from those sores, extend in a cresentic shape, from the anterior superior spinous process of one illium to that of the other. Had the real cause of these abscesses been suspected, all his sufferings, in *those parts*, might have been terminated at any time, simply by enlarging those sinuses, and removing the exfoliations.

But when Nature, after a most protracted, painful, and unassisted labor, had brought forth a whole litter of those sequestra, *one* still remained, and that in a position which

bid defiance to her best directed efforts for its removal. This was on the internal and posterior part of the descending ramus of the left pubic bone. The exfoliations which had escaped through the opening in the thigh, had doubtless come from the immediate neighborhood of this remaining one, a little lower down. But when this piece had ulcerated through the parts which covered it, it found itself, as it were, *looking into the neck of the bladder;* and had it become fully detached, would have fallen into that viscus. But remaining *in situ*, and being constantly in contact with the urine, it became a nucleus, or surface, upon which was deposited the numerous small calculi and fragments which were removed during the operation. The position of the bone was such, that in passing a catheter (an operation which Mr. L. had performed upon himself frequently for many years), the point of the instrument glided, lengthwise along the bone, and whenever the deposit had become so great as to prove an obstruction to the free passage of the catheter, the instrument would detach the deposit, which would fall into the bladder, and there become a nucleus for still further deposit. This accounts for the great number and variety, in size and shape, of the calculi; some that had recently been detached, being still perfect casts of that part of the bone upon which they had been deposited; while others, which had served for years as nuclei, had attained to considerable size.

There were about twenty of those pieces, from the size of a pea to that of a filbert, besides a great number of smaller fragments, and a small spoonful of sandy matter.

I frankly admit that I had not suspected the existence of this sequestrum, and when, during the operation, the instruments came in contact with it, I supposed it to be an impacted calculus; and continued in that opinion till I succeeded in reaching one end of it with the end of my finger. I then discovered its true character, and by the help of a director, and the application of considerable force, it was detached, and then extracted with the forceps. It was of an irregular shape,

one and a half inches in length, and one and a half inches in its greatest circumference.

As it required so much force to dislodge this piece, I was apprehensive that there was still a bony surface within reach of the urine, upon which farther deposites might be made. Hence my fears of a return of the disease.

I had attributed the persistence of the disease to urinary calculi and fistula, and had given Mr. L. my opinion upon that point; and farther, that my only hope for a *radical* cure, was that in the operation the incision might cross the fistulous canal at a point so near its origin as to cause its obliteration. This appears to have been the result, as the urine did not pass by the fistula only about ten days after the operation.

No untoward symptom occurred either during, or after the operation. The patient was walking about the streets in less than three weeks, and for more than a year past has been engaged in his ordinary business, traveling, &c., in perfect health.

South Bend, (Ind.) Oct., 1857.

ART. V. *Tubercular Phthisis—the Result of Imperfect Cell Action.* By R. E. HAUGHTON, M. D.

I now offer the views which I have formed after a careful study and analysis of many cases of tubercular phthisis, under the following title: *The primary, pathological conditions of the system, which finally terminate in scrofula and tuberculosis.*

These forms of disease are prevalent to a great and alarming extent in our country, and among our people, and the effort to obtain the primary and exact pathological conditions, and upon such a basis to erect a standard of treatment which will be successful in arresting their progress, and effecting a cure of those maladies, will be regarded as a benefaction to the race. Not that I hope to have done so, but offer my mite, to be cast into the great field of pathological inquiry,

and to be rejected as error, or gathered up as important truth. The first stage of phthisis is commonly said to be that in which the physical signs indicate a morbid deposit in the lung. But we must go back, in our investigations, to an earlier period, where there are undeniable evidences, and this long before the most experienced observer can detect the sounds which indicate an increasing solidity of structure in the lungs. There is, prior to this, a peculiar, antecedent state of the general system, which acts as a causative agent or condition, originating the altered and pathological state of the blood, and which not only acts as a predisposing cause of tubercular deposits, but elaborates and prepares the material, ere it enters and becomes part and parcel of the blood, from which tubercle is to be formed, and deposited in the lung. And here, let me say, that to this part of the subject, I ask careful attention, and careful and future study. When we go back to the investigation of the primary conditions of the system, we shall find, not only the real and pathological causes of these forms of disease, but also a hopeful period of treatment, the very period in which we may arrest the most fatal of all the diseases which afflict fallen humanity. It has always been my belief, that if we wait till a half organized, cacoplastic deposit takes place in the lung, before we are called to treat it, we shall do as we always have done, most signally fail, we are beginning at the wrong time, and place, and casting about us for a remedy, when organic changes of structure have doomed the patient to premature death. These forms of disease are of two kinds, hereditary and acquired, or, in other words, accidental. I hold that in those different conditions, we have a law of cell growth or cell development, which is peculiar to the patient alone, whether the disease be acquired, or whether it be hereditary. The law of cell growth is very different in the the two, though at last tuberculosis is the result. There is a faulty cell development, established in the system, and this exists in the imperfect and incomplete elaboration of the chyle and lymph corpuscles, because the cell membrane fails to exert its transforming power upon the nu-

trient material furnished in these fluids, hence the vital operations are imperfect, and the next result is imperfect elaboration of the blood cells, and hence imperfect blood. And in the blood, as in all other fluids, its own cell development is peculiar to itself; hence, if the materials of nutrition are imperfectly transformed, we have imperfect blood, faulty in all its elements, and unfit to build up and sustain the vital actions, which are so fully dependent upon healthy elements therein contained. The blood undergoes changes of its own, a process of growth, a process of development, peculiar to itself, and in addition to receiving new material from the food, it gathers up the debris of the tissues, as the elements of their waste and disintegration. The new materials which are supplied to the blood in the chyle and lymph cells, are immature products, and if their elaboration be faulty, the blood, though passing through a course of growth and development, cannot change *their* pre-existing condition, and hence, though this blood development is in process, it cannot perfect that rich, highly developed material, which is demanded by all the tissues of the body, then we have waste and decay, because healthy elements are deficient. The oxygen of the air cannot replace these elements, and therefore we get an impaired vital energy, impaired nervous power, and we discover failure in the conditions of health, and yet there is no consumption, no tubercles, up to this period. But in the forms of disease called hereditary, there is inherited from the parent, or parents, that peculiar cell growth, which has, in the case of the parents, or grand parents, become a law of the economy, and will sooner or later produce its pathological result, viz: tuberculosis. We do not mean here that scrofulous, or tuberculous material, is to pass from parent to child, nor that the child is born with tubercle, already within its body, but the law of cell growth descends to the child, and this law stamps upon the blood making power this inherent law which produces tubercle, and this law exists in the charter of life, which descends to the child, as much as the form and features of the child take their similitude from those of the parents. The ob-

jector would say here, that if this be true, a child descended from such parents is bound to have the disease developed at some period of life, because feature or form is an invariable law. Not so, but where the law exists, unless counteracted by all the means for promoting health, it will, eventually, be developed. In other words, the exciting causes operating upon such a tendency, will much more readily develop the forms of disease under consideration. The exciting causes here alluded to, will be attended to more in detail hereafter. In the accidental or acquired forms of disease, there exists, without doubt, a primary derangement in the digestive system, and this may grow out of extraneous circumstances; but the primary trouble does not exist in the lungs, but in the system of nutrition, and may have its origin in impure air, low, damp places of abode, in the abuse of the stomach by indulgence in eating, inducing dyspepsia, and all its train of evils; and all this teaches a means more efficient in cure than all the vaunted specifics which have ever been used as curative agents, viz: a return to exercise in the fresh air, which invigorates the whole economy, repairs the injuries of the digestive organs, and then a proper use of nutritious, healthy elements of food. But, says the objector again, not all of those who labor under derangement of the digestive organs, get development of tubercles, and the results of such a deposit. Because here is the time for the correction of these, the primary evils of which, tuberculosis and scrofula, are the results. Dyspepsia if not cured, and continuing through several years, will develop disease in the lungs, as sure as blood is manufactured out of the materials of nutrition, the food which we eat. Also, in those cases of hereditary taint, the same causes may act as predisposing influences, and cell development being regulated by the same law, be engrafted, as it were, upon the inheritance of life, thus becomes much more certainly and readily active, and the morbid deposit is as surely a product of this cell development as that the patient sprung from a parent stock, which has exhibited either the scrofulous or tuberculous cachexia. An objector may say, but the morbid

deposit does not take place in all cases, nor is the diathesis present in many such cases; one generation to which this charter of life, this law of cell development has descended, escapes the dreadful fatality. But look again; the next generation, or, at farthest, the third or fourth generation, exhibits the surest evidence of inheritance, and these types of disease are presented to the observer, leaving no doubt as to the original taint; and the law or type of development is as surely an organic law as any of the economy, though not always so evident as some others. Summing up, then, we say that the scrofulous, or tuberculous diathesis, has its primary existence in the faulty forms of cell development, which give rise to diseased blood, and this disease of the blood mass is one affecting its growth and development, and this becomes a part of the organic law, in the transmission from parent to child, hence the hereditary succession is as perpetual as the family likeness, except the law of descent and transmission be invaded by an influence stronger than the tendency, and this may be done by intermingling of the races in the marriage relation. In this way, not more than two generations would be cursed by the hereditary descent of those forms of disease. Of course, attention to all the laws which regulate and promote health, come to be part of the great influence which effects a change so desirable. But what is tubercle? A deposit from the blood. This does not answer the question, and it is not easy to answer it, as shown by the views of many eminent pathologists, who have expressed very different opinions in regard to its character. It has physical and chemical characters, and chemical analysis gives us an approximate character or knowledge of it, though not definitely settled, because, chemically, its character changes, according to age, condition, and period of disease. And here let us inquire, what is scrofula? Scrofula is a name given to a form of disease which manifests itself in enlargement of the glands in various parts of the body, which finally soften, suppurate, dischaging scrofulous pus. This condition of health is preceded by a peculiar condition of the

system, manifested by a pale or waxy color of the skin, blue eyes, light hair, and a delicate physical confirmation, and all this the result of that peculiar law of cell development, and hereditary transmission, before alluded to. These glands which take on this process of softening and suppuration, are the seat of tubercular deposit, and the same process of softening, suppuration, and discharge, takes place as goes on in the lung when the seat of the same kind of deposit. Hence the difference is more in name than fact, and only differs in the locality of the morbid process. But while this is the case, and the glandular system is going through these changes, deposits of tubercle take place, or have taken place, in the lung, and may take place in any organ in the body. But this is not necessarily so, the lungs may escape this deposit, so that respiration is carried on with greater perfection than can be done when impaired by foreign deposit, hence, by judicious management, tubercular disease of the glandular system is not necessarily so fatal a trouble as that of the lungs, but the same general law of constitutional taint and disease, belong as much to one as the other. Tubercle is not confined to man alone, but all animals subject to confinement, and deprived of pure air and wholesome food, will exhibit evidence of tubercular deposits in various organs. If this be true, which is confirmed by the experience and observation of all investigators, it furnishes us with a singular fact, and one of much value in the hygienic treatment of those forms of disease, and teaches us to look more to their prevention than their cure, after having been fully developed. I have stated that consumption and scrofula were induced, primarily, by imperfect cell growth, which elaborates the nutrient material which is furnished and emptied into the blood, hence the blood is changed, for how is a stream to be purer than its source? This is, in fact, the most important idea in the investigation of this subject—the great central idea upon which is based the whole knowledge of these diseases. In other words, the organs in which the disposition to primary deposit almost exclusively prevails, are those which, with equal certainty, may

be called the blood making organs, or those which give rise to blood development, and through this, we arrive at a proper estimate and true interpretation of such diseases. The preparation of food begins in the mouth, and is continued in the stomach, and owing to the quality and quantity which is imposed upon this organ digestion fails, the gastric juice is not brought into contact with the food, and frequently a changed condition of this fluid takes place, and the food issues from the stomach in a crude, half digested state, to be intermingled with the biliary and pancreatic secretions, which cannot perfect the process begun in the stomach, hence we have an imperfect material, upon which the lacteals and absorbents are to work, and as the process of absorption is done through the agency of cells, if the nutrient material has not been converted into a homogenous mass, by the admixture of all the fluids necessary for this purpose, the process of absorption is interfered with, and a material is offered to the circulation deficient in elements for healthy blood. And this process continues, from time to time, till disease of the blood mass, and consequent disease in other important organs, supervenes. Mental emotions, depressing influences, as grief, fear, the high excitement of passion, the restless ambition which pervades the human family, and many other influences come in to accelerate the troubles here begun.

But now we come to take another step in the progress of our investigations into the pathology of those troubles. The blood is sent to the lungs loaded with these impurities, which result from imperfect elaboration. For what purpose? For creation; to be brought into contact with the oxygen of the atmosphere; to be purified for the purposes of health in the general system. But what do we find? The blood which is sent to the lungs is venous blood, containing, in a healthy condition of the system, the waste products of the tissues, and now comes an increased amount of labor for the lungs, in the increased products of imperfect cell development, viz: imperfect chyle, lymph, and blood. There is also a fixed and definite chemical relation between the elements of the blood and

the oxygen of the air, and only a certain amount of oxygen can displace so much of the impurities of the blood; hence a failure is the result in the important function of respiration, which, added to the one described in the imperfect elaboration of the primary fluids, increases the difficulty, and these impurities again pass the round of the circulation. One of the elements contained in the blood is carbon, as an element of the oxygenation of the tissues.* This takes the place of the oxygen, which should pass the round of the systemic circulation, hence we have imperfect aeration of the blood, and next a failure of all the vital processes, more or less complete. Here we may recur to another mode by which the blood mass becomes impoverished, and we begin at the point where the half elaborated chyle comes into contact with the lacteals or absorbents. The process of absorption by the lymph glands, is carried on by cells, and it is the law of the economy that those cells possess the power of selection, and only such material as has become prepared for this process, through the agency of these cells, will be appropriated, and this being in diminished quantity, blood is not manufactured, and therefore nutrition is at fault in the tissues; emaciation occurs, and through this process a defective tonicity of all the structures occurs, and there is a general malaise, paleness of the countenance, coldness of the extremities, the result of defective circulation; and finally a morbid condition of the organs thus engaged in the great process of blood manufacture takes place; even the blood membrane, which, in health, exerts a most powerful influence upon the character of the blood, from these conditions soon exerts a morbid influence, and a mass of diseased blood circulates, to carry disease and death into the very citadel of life. Here we have more rapid wasting, or emaciation, which is so marked a system of consumption. This imperfectly vitalized blood, thus circulating through all the organs, deposits elements in the glandular structures which is soon seen in what is known as the scrofulous cachexia.

* How is carbon, *in the blood*, an element of the oxygenation of tissues?—ED.

Defective aeration of the blood then comes in to perpetuate the trouble already begun, and is one of the conditions, not first, as some (*modern writers*) have it, not singly and alone, as is taught by the same writers, but one of the conditions, and only perpetuating a difficulty which began in the cells, which prepare the pabulum of life, and which this process of aeration cannot remove.

Taking the chain of morbid events thus occuring, we can erect a pathology and treatment which is more preventive than curative, and which is indicated to us in the causes thus brought to view.

The doctrine of the inflammatory nature of tubercles is now taught and believed by many, but it will not bear the test of post mortem inspections, especially of those who have died of other diseases, while tubercles were present, revealing the fact that the pulmonary structure was perfectly healthy and free from inflammation contiguous to these deposits. Professor Gross, in his able work on Pathological Anatomy, treating of tubercle, says: "In a former edition of this work, I expressed the opinion, that tubercles are always of inflammatory origin, and a more extended investigation of the subject has only tended to confirm this conclusion." We have no doubt but that tubercle may be the result of inflammatory diseases, which have enfeebled the body, impaired the vital elements of the fluids of the body; but this will not account for all the cases which occur, without other previous disease, in any organ so far as observed; yet it is developed, and so insidiously, that the patient is hardly aware of disease, before he is a confirmed consumptive. Prof. Carpenter, in his late edition of Physiology, says, "That persons who are of a scrofulous, or strumous constitution, have an imperfectly elaborated fibrin, while the blood contains an unusually large number of colorless corpuscles, while the red corpuscles are in unusually small proportion." "We can understand," says the same writer, "that such a deficiency in plasticity arises from defect in the nutrive processes, and thereby is made worse; hence this tendency to cacoplastic deposits," (*without inflam-*

mation). This is my own view of the nature of this deposit, admitting the influence of inflammation in increasing the tendency to rapid deposits, after the cachexia once exists. My view is strengthened and supported, as regards cell transformation, or cell growth, as well as imperfectly elaborated fluids, in chyle, lymph, and blood, from this view, taken from Carpenter: "The most frequent of all the degenerations of lymph," he says, "being, when the lymph is placed in any unfavorable condition from the first, for its development, and the result is, a plastic, or cacoplastic material, which again, after finding its way into the blood, is secreted and deposited by cell growth in the structure of the lungs, and we have an irritation as the result of such deposit; and finally inflammation is set up, locally, around these deposits. Softening takes place easily, the result being unorganised products, pus, and an aplastic material, contained in the crude tubercle, as it came from the blood, or from the admixture of blood and lymph, very imperfectly elaborated.

Further evidence of the doctrine taught in this paper, is this: The material, unorganized as it is, which is provided for the healthy nutrition of all the different structures of the body, is converted, under the controlling influence of vital action, into living cells; and all the chemical and physical forces, by the operation of cell force, are converted into vital powers. But Carpenter says, again: "It is inherent, in the very nature of the living organism, that this instrumentality should exist but a limited time. The changes," he continues, involved in the process of organization, have the effect of rendering the organic structure less and less instrumental in determining this metamorphosis of force; and thus a time arrives, when the capacity of development is exhausted, and these forces, no longer turned to account in vital activity, begin to exert a destroying, disintegrating power. Hence, then, in the process of cell-growth, these chemical forces are known to exert their influence; and, if the cell-force is not active enough to resist the forces so operating, we have imperfect nutrition and imperfect fluids, as the result of this

cell-force; and we need have no doubt as to the origin of the diseases, which grow out of such conditions. The cell-force, which is operating, may be perverted—nay, is so—by such influences, and this perversion ends in the deposit, in many cases, of these unorganized, cacoplastic deposits, which are frequently found in many of the tissues of the body.

Then we come clearly to an investigation of the laws of Cytogenesis, an investigation of the laws of cell-growth, cell-life and cell-force; and we shall be able physiologically to show, that this manifestation of force becomes so defective, through various agencies brought to bear upon it, that disease is the result. By the aid of the microscope, all tissues are reducible to three forms, of which cells are the most important. The whole fabric of organized bodies is built up of cells, and, moreover, we know that by cells and their derivatives all the vital actions in the economy are performed. Each kind of tissue in the body, as formed by cell-growth and cells, differ in their character as the necessity of the vital act demands, when the correlating forces are healthy and originate in healthy conditions. But we find that transforming influences may be exerted upon the cell or its contents, and, when this takes place, the original intentions of the cell forces engaged are so changed, that, instead of building up new tissue, or supplying the material for such tissue, morbid conditions result, and morbid material may be deposited.

Carpenter says, again, "that cells cannot be formed, unless the pabulum be supplied which they require, not only for the generation of the cell wall, but also for the filling up their interior with its characteristic contents." We find, also, that cells have a converting power upon their contents, changing them so that new material is the result. If this condition be true, and can exist in a physiological state, by parity of reasoning, the same condition obtains in a pathological condition, and cells, by the transforming power which they possess over the material which they contain, may deposit foreign growths and originate new forms of diseased action. Hence, it is not unlikely to suppose that tubercle is the result of cell

action and deposit—not of itself possessing vitality or organization, but a result of changed cell-force.

Thus, in the nutrient material which is furnished to the lacteals and absorbents of the alimentary canal, there is contained the future blood and tissues for the body, if so be no diseased action is set up; and it must be elaborated, vitalized, by the operation of cell force—and these cells are the organs of building up and tearing down this most noble machinery, the handiwork of God.

There are various influences and agencies which exert a deleterious influence upon the living body—these forces not being kept at bay by the operation of the vital powers, but manifesting themselves either in the modification of its vital operations, or in the destruction of living tissue, either directly or indirectly, by the deposit of some heteroclite material, which becomes the source of irritation to surrounding healthy tissue; and thus the body is impaired, and a continuance of the process produces death. The living body has not the power to resist the operation of chemical and physical agencies, but is completely under their control, —these agencies being modified, however, in the living organism, by the continual play of the vital actions—thus being very different from the same influences, in a body where the play of vital actions had ceased and Death had claimed the victory. Again, while this is the case, there are certain other agencies which modify and pervert the ordinary healthful play of the vital actions, without destroying them, and thus give rise to morbid actions.

Therefore, in proportion to the degree of vital energy which cells possess, in turning some agencies to their own account and resisting others, will be the sum total of their power in carrying on the healthy actions of life; and, as a consequence, when resistance to such influences is impossible, waste, decay and disintegration are the results. Then the laws of cell life, development and growth are but the phenomena of normal life, and of disease; and the law of remedial influence is but an example of the truth of th e

laws. But, as we have found that the pabulum of life, the material of cell-growth, cannot be appropriated unless properly prepared, we see the great failure in the processes of nutrition depends, first and principally, upon the manner in which digestion is performed, and, secondly, upon the failure of the cells of lymph glands to appropriate such material. Hence a general failure of all the principal vital actions; because, if nutrition is impaired or stopped, the chemical affinities and vital actions begin to exert their transforming power, and there is no resistance to the morbid process which goes on.

This has a corresponding evidence in the result which takes place when nutrition is again carried on and the digestive powers resume their proper office. These changes have taken place in tuberculosis, and, by exposure to fresh air, the use of good, wholesome diet and plenty of exercise, the whole condition of the system has been changed—and this, through the influence of certain chemical and physical changes. For instance, the exposure of the patient to fresh air brings oxygen into the lungs, to transform the blood; the food becomes palatable by exercise, and thereby gives the power for its digestion—and hence its appropriation.

But those other agencies, before alluded to, which the vital powers can not long resist, are: confinement in close, unventilated rooms; little or no exercise; breathing over and over again the noxious emanations which take place from the skin and lungs—thus poisoning the blood, impairing digestion and enfeebling the body to such a condition, that it is easy to find tubercles, as the result of such a miserable disobedience of the great laws of life and health. And the sufferers are often those upon whom Fortune has lavished her bounties and surrounded with wealth and luxury; and, through the misguided love and sympathy of friends, a cool breath of air is not allowed to fan the hectic cheek, and that air, which nature so much requires, is shut out—and thus the patient is hurried to that "bourne from which no traveller returns."

There is further evidence of the positions here assumed, in

the action of the liver and the tendency to deposits of fatty matter in that organ. The principal element in tubercle, as derived from analysis, is albumen; and the office of the liver is a double one—not only a depuratory organ, but an assimilative one. The assimilation of the albumen, with which the blood comes loaded from the alimentary canal, seems to be an important office of the liver. Well, then the conclusion at which we arrive is this: That the liver exerts a most happy influence in the vital changes of the elements which go to make up the blood when the system is healthy. But when disease of the system takes place, and impairment of the processes of nutrition ensues, there is an arrest or change of this healthy action, and the materials, instead of being converted into the tissues of the body, are converted, in the liver, into fatty matter, and there deposited.

(*To be Continued.*)

Bibliographical Record.

Clinical Lectures on Certain Diseases of the Urinary Organs, and on Dropsies. By ROBERT BENTLY TODD, M. D. F. R. S., Physician to King's College Hospital. Philadelphia: Blanchard & Lea, 1857.

Next to Anatomical and Physiological, *Clinical Instruction* is, confessedly, most essential to the practitioner of the healing art. Whilst the former affords him a sure foundation, the latter furnishes him with the most reliable and enduring materials, with which to erect a magnificent superstructure of good works and of undying fame.

We regard, therefore, every intelligible effort to enlarge the sphere of *clinical teaching*, and to give it *prominence* in public estimation, as deserving the highest commendation. Thus considered, the work, whose title stands at the head of this article, merits something beyond a casual or common-place notice. The high position occupied by the author, too, both as a practitioner, as a teacher, and as a popular writer, presents a further reason why the *Clinical Lectures* should receive more than a brief and imperfect examination, by all who would fully understand the subjects they are designed to eluci-

date. No reader, we think, who has toiled up the rugged ascent of professional experience, and acquired merited position with no other lights than those which have shown upon him from the ordinary teachings of the lecture room, from the perusal of the systematic works commonly found in the Doctor's library, and from his own limited experience, will fail to appreciate the purpose, set forth in the following quotation from the author's preface:

"In these, as in former lectures, my aim has been, to teach by example, to inculcate cardinal points of diagnosis, treatment and pathology, by observations, made at the bed side, and by illustrations, drawn from suitable cases."

Nor will the notions held and enforced, in reference to the most profitable mode of conducting *clinical instruction*, be less satisfactory to him, who has duly considered the subject.

The necessity of "intelligent and industrious *Clinical Clerks*," of system and order in the mode of procedure in hospitals, reference being made to the most advantageous hour of the day, and the propriety of abridging the length of the ordinary systematic lectures; also, of appointing special clinical teachers, of rotation in appointment and division of labor,—all these have received particular attention from the author. He urges, also, upon those who are "responsible for, and interested in, the advancement of medical education," the imperative necessity, "that *in every school, hospital attendance and clinical study be made the nucleus of the teaching of all other subjects, in preference to the existing system, which, in effect, makes it subordinate to the rest.*"

All who are thus responsible and interested, will cheerfully approve the suggestion that, *in every schoool*, "the examinations instituted for medical diplomas and degrees," should be "conducted in a manner adapted to test positive knowledge, rather than to encourage flippant expertness in answering questions," in order that the "*grinding process*" may be avoided, "and a more healthy and zealous pursuit of scientific and practical knowledge, for its own sake" may be made to take its place.

The volume consists of sixteen lectures, all devoted to the consideration of subjects of great practical importance. In the first two, Hæmaturia, in its various forms, and results, is treated of and illustrated both pathologically and therapeutically, by well selected and instructive cases.

The third and fourth consider those forms of Renal Disease, in which albuminaria, and serous effusions, constituting the varieties of dropsy, are prominent symptoms or results. The seven, which follow in numerical order, contain an amplification, more in detail, of the symptoms, pathology, diagnosis, doctrines and therapia of dropsies, in their different locations, the states of the economy, in which it occurs, and may be anticipated, as, likewise the condition of, and influence upon, organs and functions, collaterally implicated, as the lungs, the liver, respiration, etc., in connection with, or resulting from, lesion of the renal apparatus. In these, too, the principles enunciated, the indications of treatment, and the means resorted to for the fulfillment of such indications, as well as their effects and the ultimate results to the sick, are exemplified, by a succinct statement of appropriate cases.

The concluding five lectures are chiefly appropriated to Gout, its symptoms, its various manifestations, and the influence it exercises in modifying the character of renal diseases.

We cheerfully award to the author, great merit, and no common courage in selecting and grappling with such prominent, complex and often difficult maladies, or results of maladies, as hæaturia, dropsies and gout, as the themes of clinical instruction.

Says another: "The object of *clinical teaching* is to impart to the student, facility in dealing with the problems of disease which are ever rising before him. It is, therefore, a great advantage to him to have large and striking phenomena, so opened out and explained to him, in all their possible causes and relations, that whenever and wherever he meets them, they may have to him, all the significance that really belongs to them."

Now, it is but too common for the mind to grasp, imperfectly and superficially, the subjects that present themselves for consideration; hence the necessity of having them often brought forward and delineated, that they may be fully comprehended.

Thus it is that drawings, models, and maps, enable the beholder to acquire more accurate and comprehensive views of natural objects, scenery, and works of art, than can possibly be acquired from oral or written description. Hence, also, the value of philosophical experiments as illustrative of scientific doctrines and principles, and the no less illustrative significance of cases of disease presented to the observation of the learner; of the mode of conducting examinations

of the sick, in order to elicit essential facts, as the basis of intelligent deductions, and of post mortem investigations. Nor is the concise relation of striking cases of disease wanting in interest or destitute of value, as sources of instruction.

Thus it is, too, that he whose mind is thoroughly imbued with the great truths of physiology and theprapeutics, and, moreover, who has studied disease in obedience to the dictates of philosophical deduction—in other words, who has treasured *facts* in reference thereto—has it in his power to exhibit,not only the minor and comparatively unimportant, but the more weighty and complicated questions of professional research, to the vision of the reader or hearer, with a freshness and copiousness of illustration that enables him to perceive in them more than he had perceived before—that dissipate obscurity and banish doubt. It is under these circumstances and in the fulness of the love of philosophy and truth, that Dr. Todd has drawn upon his large resources, both of observation and experiment, and collated the numerous facts and deductions, which constitute the work now under notice.

In the lectures on hæmaturia, the reader will find an explicit relation of most, if not all, that is essential to be known in reference to its varied forms, locations, causes, symptoms, complications, diagnosis, prophylaxis, and treatment.

In regard to causes, however, we may say we find at least one statement which does not accord with our own observations, and which, we are inclined to believe, will be found to be in controvertion of the experience of other competent observers. The author remarks, "by far the most common cause of bloody urine, is the disturbance of a calculus, formed and lodged in the kidneys."

In the course of our experience, we have met many cases of hæmaturia. Some we could trace directly to irritation, congestion, or active hyperemia of the kidney, and induced by various causes; some to the influence of suppressed habitual discharges, as hæmorrhois, or interrupted catemenial flow, the kidney, or the the urinary vescicle being the source, as the predominant pre-disposition; some succeeding the retiring of chronic cutaneous eruptions; some as the sequel of, and accompanying the prostration, consequent upon long continued fever; and not a few, originating in the bladder, from passive congestion, or active hyperemia of its mucous lining, but never a case, that we could carry back to *the formation and lodge-*

ment, and "disturbance of a calculus in the kidney;" nor a single case that did not readily yield to treatment, adapted to the condition of the constitution under which it arose. This may come from local influences, whether of climate, pursuit, general mode of life, moral influences, by whatever cause induced, food, drink, etc.

In the course of a continued practice in the same locality during a period of thirty-two years, and among a large population—mechanics and tradesmen, as well as agriculturalists—no more than two cases of urinary calculus occurred. Of these, one was in a lad about twelve years old; the other, in a foreigner about fifty. Both were cut, and recovered most satisfactorily.

A reference to statistics will be found, we apprehend, to confirm, the results of our observations. Thus: "In one hundred post mortem examinations, where the history of the symptoms during life, was obtained, hæmaturia is noticed as having occurred in five only. In one of these, it was from purpura; in a second, from diffuse cellular inflammation; in a third, from morbus Brightii (enlarged kidney), in a fourth, from cardiac and renal disease; and in the fifth, from scrofulous, renal disease. In not one in the hundred, was there renal calculus."

If, then, calculus can be shown to be a comparatively rare abnormity, and particularly in certain localities, the inference will obviously accord with our position, in reference to the matter in question; for, although we have no statistics within our reach, showing the comparative frequency of hæmaturia, we have no question, since the disease may arise from many and various causes and conditions, as shown by the author himself; but every practitioner who has seen much practice, has seen examples of this disease, in the proportion, at least, of twenty to one, of calculus.

Admitting the former, then, to be thus, in excess of frequency over the latter, how can it be that, as a rule, applicable to all countries and localities, "by far the most common cause of bloody urine is the disturbance of a calculus, formed and lodged in the kidney?" Again, may it not be true that what obtains in one locality may be wanting in the attribute of truth in another, and, therefore, unsafe, as the basis of a doctrine, proposed to be general in its application?

Let us now advert, briefly, to records, showing the relative frequence of calculus in different localities, and thus endeavor to show that what the author puts forth as a rule, without qualification, must

to say the least, have been hastily uttered, or, if true, it is so only in regard to certain countries, or even to certain sections of the same country.

Take England, for example. And here, while we find that "calculus disorders" are somewhat frequent, we learn that remarkable differences characterize different sections. Thus, while Dr. Prout, calculates that one in fifty thousand five hundred of the entire population dies of calculus annually, in England and Wales, he shows that the greatest mortality is in Manchester, the proportion being, on the average, about one in thirteen thousand two hundred, annually. In York, Durham and Wales, the mortality ranks next in degree, averaging about one in thirty-one thousand. The mortality is above the average, also, in Stafford, Lancashire, the west riding of Yorkshire, Leeds, London, and Liverpool, while it falls considerably below, in the districts now to be mentioned, and in the following order: Norfolk and Suffolk, where the average range of mortality varies but little from one in sixty-four thousand five hundred, nearly five times less than in Manchester. In Cheshire, Dorset, Oxford, &c.,—Essex, Devon, Cornwall and Sommerset, the average mortality, annually, is but one in two hundred and seven thousand, something more than fifteen times less than in Manchester. This is a most profitable field of research, and nothing could afford us greater pleasure than to trace the parallel throughout the range of literature that belongs to the subject, but our limits forbid. We can only allude to a few particulars. It will be found that differences, not less remarkable, exist throughout the different countries of Europe, than are shown to belong to the respective sections of England and Wales. Thus, in Ireland, calculus, as we learn from Dr. Yellowly, is a rare disease. In Scotland, France, and Holland, it is greatly more common, whilst in the principal localities of Prussia, in Spain, the Sardinian States, and in the Ionian Islands, and particularly in those districts in which the Rhenish variety of wine is manufactured, "the malady is infrequent."

Again, in Denmark and Russia, it is of common occurrence, while the inhabitants of Saxony, Norway and Sweeden suffer but little from it. An examination of the statistics of the Austrian dominions, in reference to the point now being considered, shows that, in ten years—from 1820 to 1830,—in a population of something more than

nineteen and a half millions, no more than one thousand four hundred and forty-nine cases of calculus occurred.

If we extend our search to what is taught by the history of our own country and the British dominions on the American Continent, in reference to the point in discussion, we shall find that while calculus, as regards the whole population, may be considered an infrequent malady, there are no inconsiderale differences, in various sections. Now, we deduce from the foregoing facts, that, unless hæmaturia is of vastly less frequent occurrence than our observations indicate, from the comparative infrequency of calculus, the position of our author cannot be strictly true, as regards the inhabitants of England and Wales; that, in reference to certain sections, as Chester, Dorset, Oxford, Essex, Devon, Cornwall, and Sommerset, it must diverge widely from truth; that, save in certain localities, it can scarcely be said to approximate the truth; and therefore that it cannot be relied upon as a law of general application, and as a guide in diagnosis. That it may be true, or a near approximation to truth, in certain districts, and particularly in Manchester and in the great metropolitan city, in which the distinguished practitioner and author has gathered his experience and won his laurels, seems not improbable; for we find that London, though our statistics are silent as to the proportional frequency of its occurrence, is, nevertheless, one of the localities in which the mortality from calculus is above the average. As regards the speeies,—the civilized portion especially,—it is nothing short of a fallacy, whose effect must be to lead the inexperienced astray. On the whole, we conclude Dr. Todd must have intended to put forth only what is true in certain limited districts, or that he hurried to his conclusion, without having given the subject the full and earnest investigation, by which he is characterized.

At page 83 we find the following: "The nausea and vomiting were also probably caused by an irritated state of the gastric mucous membrane, arising from the diseased blood. It is, indeed, to this poisoned state of the blood, resulting from the formation or retention in it, of substances which would have found a ready exit through the kidneys, had they been in a sufficiently healthy state, that most of the symptoms from which this patient suffered, were due. In this respect, all forms of diseased kidney are much alike; all tend to produce similar secondary phenomena, whether large or small, the diseased organ fails to excrete the normal elements of the urine, and

these, or certain of them, accumulating in the blood, affect all the tissues and organs, more or less, and at length exert their baneful influence on the nervous system, disturbing its functions in the most serious manner." In the course of the volume, numerous references will be found to the, now getting to be popular doctrine of the existence of "disease," or "poison in the blood," and of the cogency of such diseased condition, or poison, as a cause of disease; and particularly of the urinary organs, by giving rise to irritation and congestion, if not to inflammation, in their efforts to eliminate *it—the poison*—from the circulating mass.

Refraining, for the present, from the discussion of questions, both physiological and therapeutical, involved in the above quotation, and the doctrines inculcated, we observe it is incumbent on the advocates of such principles and doctrines, and in an especial manner upon the *learned author*, to inform us in what this alleged "diseased condition" consists, what are the characteristics, as well as the *modus operandi* of the toxical materials, so frequently, and with such a show of learning, announced, and what their antidotes. A reader, who happens to be a little fogyishly inclined, might not inappropriately inquire, why not return to the most out and out humoralism at once, and re-establish the supremacy of acrimony, atribilia and lentor?

The former had conferred upon it, the power of irritating, corroding and dissolving the substances of the body, not endowed with it as an essential quality; hence acid and alkaline acrimonies. The author says, "And these, or certain of them, accumulating in the blood, affect all the tissues and organs more or less, and, at length, exert their baneful influence on the nervous system, disturbing its functions in the most serious manner." It may be asked, where is the real difference? Verily, it seems like taxing the credulity of the intelligent men of the nineteenth century overmuch;—but we forbear. Within the past few years, the condition of the urinary secretion, which exhibits the existence of albumen, its value in diagnosis, the therapeutical conclusions to which it gives rise, as well as the pathological conditions, whence it originates, has called forth much learned investigation, and the hybrid term, *Albuminaria* occupies a large space in the periodical literature of the professional world, and finds a prominent place in the systematic productions of the age. The lectures devoted to the consideration of hydropic effusions contain an intelligent, and, in most particulars, a satisfactory resume, of the accepted doctrines,

connected with the subject. One thing, however, surprises us not a little; it is that we find no allusion to the originator of the doctrine, now so absorbing, Cotunnius, to Darwin, who entertained it, nor to Blackall, who amplified and elaborated it into a treatise, illustrated by numerous cases and gave it to the world in the early part of the present century. In the portion of the volume which treats of Gout, the reader will find a satisfactory summary of what pertains to the subject, not only in its individual aspects, but in its complications. All things considered, we regard the performance as creditable to the author, as a highly useful contribution to practical medicine, and cheerfully recommend it to our professional brethren.

For sale at the house of Raymond & Selleck, in this city. K.

Spirit of the Medical Press.

On the use of Aconite as a Therapeutic Agent.—I wish to give the readers of this Journal my experience with the use of *aconite* as a remedy especially as I find, in conversation with my medical friends, that very many of them do not avail themselves of an agent, that, with me, has proved very efficient and satisfactory.

The aconitum napellus (monkshood—wolfsbane) is represented by writers, with great uniformity, to rank among our most active poisons; thus in the article on aconite, in Wharton & Stille's Medical Jurisprudence:—"The leaves and root of the aconitum napellus contain one of the most extraordinary and speedy poisons known; and fatal mistakes are recorded from small portions of the leaves or root having been eaten by mistake. Writers also describe the root, seeds, and leaves of the plant as possessing "a hot, acrid taste, giving rise to a burning sensation in the fauces, numbness and tingling in the limbs, swelling and pain in the abdomen, vomiting and purging, accompanied by giddiness, delirium, dimness of sight, and other symptoms indicative of cerebral affection;" and even when simply applied to the cutaneous surface, it is said to produce at first a feeling of heat, which is followed by prickling or tingling sensations, with numbness.

Although I have directed the use of aconite with comparative frequency, I have not in any case observed such strongly marked manifestations of its therapeutic effect as those which are thus attributed to it; and I am satisfied that, administered *medicinally*, these are exaggerated descriptions of its effects.

Another quality attributed to aconite is, that while consciousness may be in no degree impaired, both general and special sensibility will be greatly diminished. Thus, Pereira relates, that under the influence of a full dose, a dog would wag his tail when noticed by his master, and endeavor to follow him around the room, though quite insensible to pinching, or the pricking of a needle.

With such very positive effects upon the nervous system, we should naturally expect this remedy would find a prominent place in the treatment of a large class of neuralgic affections, and diseases of a kindred character. It is, however, somewhat singular, that Baron Storck, who first brought aconite into special notice as a remedy, about one hundred years since, more particularly recommended it in scrofula, dropsy, phthisis, and cancer; and having enjoyed a brief but of course fictitious reputation, for the cure of these formidable diseases, it passed for a time almost entirely out of notice again.

I have found good results from the use of aconite, in almost the entire range of neuralgic affections, and in those obscure complications of rheumatism and neuralgia in which there is freedom from local or constitutional trouble, independent of the nervous derangement; but more particularly in such cases as are usually styled pure neuralgia, I have frequently had results almost as prompt and satisfactory as were recently attributed to valerianate of ammonia.

Something more than a year ago, a lady called upon me for advice, for a severe neuralgia of the face and head. From the history of the case, I supposed it to be a result of previous attacks of miasmatic disease, and accordingly prescribed quinine, which relieved her temporarily, but every few weeks she would have a relapse, and for several days at a time suffer excruciatingly. In addition to the quinine, quite a variety of customary treatment was resorted to, until in November I directed the following prescription, after she had suffered a week, and had tried without avail all the remedies that hitherto had given temporary relief:

R.—Tinct. Aconite, *Root*, dr. i.,
Tinct. Cimicifuga, oz. ij.

Sig.—To take a teaspoon full every four hours.

My patient took three doses, when she was promptly and entirely relieved; and what is better, she has scarcely felt a neuralgic twinge since, now about ten months.

In another case, a friend had for a long time suffered a peculiar form of neuralgia, or neuralgic rheumatism in the arm, which seemed to yield to no remedy, even temporarily. I suggested the aconite. The result was equally prompt with that of the case I have just given. I might multiply these satisfactory examples to considerable extent.

The formula given above is the one I most frequently use in administer-

ing the aconite to adults. It will be observed that, given in that way, each dose would be equivalent to about four drops of the tincture (except that tinct. aconite gives something more than sixty drops to the drachm); and in that dose I have never seen any effects sufficiently marked or violent to occasion alarm. It will also be observed that the tinct. of the *root* is directed. The U. S. Dispensatory recognises two officinal tinctures: of the *leaves* and of the *root*. I prefer the tinct. of the root, as of greater efficiency, and more reliable as to uniformity of effect. The tinct. cimicifuga is intended chiefly as a vehicle, but selected with the view to its contributing to the special effect of the aconite.

I have not tried the aconite in acute rheumatism, but in the chronic rheumatic pains, particularly such as aged people complain of, I have seen very excellent effects. Neither have I used it much locally, though with many, even those who do not use it internally, it is a favorite topical application.

There is a form of neuralgia, associated with uterine derangement, which I have frequently met with, coming up sometimes in connection with the catamenial period, or immediately subsequent to it, in which there is pain through the hips, sacrum, and uterine region. Sometimes I have seen this group of symptoms succeed abortion. I remember a case of this kind, where the local distress I have just alluded to remained very troublesome for several weeks, while much of the time there was almost uninterrupted sleeplessness, despite the free use of opiates. The tinct. aconite root, given through the afternoon and evening, relieved the neuralgic pain, and secured a sweet and refreshing sleep through the night.

I have no explanation to give of the *manner* in which aconite acts therapeutically. I offer the suggestion, however, that its action is directly upon the nervous tissue itself. If this be correct, we should find in some sort a key to the irregular action of remedies in neuralgic affections, and some explanation of the fact, that a remedy gives prompt relief in one group of neuralgic cases, while it is apparently void of all effect in a group apparently similar.

These suggestions as to the use of aconite are not given as by any means original, but simply as confirmatory of old known, but not *practically* known truths. The query is naturally suggested, are there not many other active agents sleeping on our shelves, which, if called into service, would materially contribute to the comfort of our patients, and to our own self-satisfaction. Will not, for example, some patient investigator demonstrate that the gungha, or cannabis indica, is a valuable agent, administered *medicinally*, for something more admirable than the unearthly intoxication which is its peculiar manifestation.—*Medical Observer.*

Editorial and Miscellany.

VERITAS ET JUSTITIA, SINE TIMORE.

Professional Honor;—Not that *reflected* honor which our profession has been so free to lavish, even upon the unworthy, but that which has given character and perpetuity to Medical Science. In this we find the text for a few observations.

The practitioner of Medicine, who has acquired the confidenee of community, sustains a relation to society which can not be secured by any other accomplishment. He is not only entrusted with the life of his fellows, but obtains a passport which freely admits him to the inermost apartments of *home*, where he is even permitted to hold the secrets and share the sympathies of the heart. What bond of security has he given for these chartered rights and priveliges? His *honor*, endorsed by the profession as a whole, and this ought to be sufficient. But, alas! poor human nature too often finds in *our* profession melancholy examples of its infirmaties. Neither great acquirements, the vows of religion, nor honorable position, always afford undoubted assurance against the violation and forfeiture of the sacred trust. Even carnal lust has invaded the sanctity of home, under the guise of professional honor, prostituting the highest prerogative to the gratification of sensual desire. If we may judge from numerous individual instances, there seems to be a prevalent disposition to lay aside moral character, to ignore the code of Medical Ethics, to advertise medical talent and acquirement, to loan professional honor for the ends of justice, and even to become a party to crime for a paltry consideration. The editor of the American Medical Monthly tells us in the September number, that "there would have been no difficulty in obtaining the services of a Doctor, who, for a a thousand dollars or less, would have done all that Dr. Uhl was asked to do."

However reluctantly we may admit the truth of this remark, it is indeed a humiliating commentary upon the honor of our profession.

What has aroused the attention of the Medical public to the subject of "criminal abortion," urging it upon the attention of State Medical Societies, calling forth fervent and lengthy editorials from the Medical Press? What is it, but the facility and readiness with which medical men have permitted themselves to be pursuaded from

the legitimate path of *Professional duty and Professional honor?* It has even been said that our Statutes, which were designed to recognize and punish this infamous crime, have been rendered null and void by the apparent sanction of respectable Medical men.

Is it not time, then, for even the respectable members of the profession, to consider whether they are not entertaining loose opinions upon this subject, whether their influence towards the suppression of the evil is not at least negative. Popular opinion upon the subject of infanticide at the present time more fitly belongs to an age of barbarism.

The destruction of fœtal life before the time of quickening, seems not to be regarded as a criminal offence, either in the sight of God or Man. Hence the enormous sale of nostrums *that "must not be taken in the early months of pregnancy."* Hence, too, the numerous applications and entreaties which every physician has, to violate physiological, civil and moral law, by the sacrifice of embrionic life. These ought to be startling truths, and sufficient to prompt every respectable member of our profession to consider the obligation which he owes to community and his own honor, and to labor with zeal to correct this morbid public sentiment.

The *character* of the Medical profession, in every community, is just what Medical men choose to make it. If they are true to its highest interests, and worthy of its mission, they will ever preserve its honor. R.

"*Medical Education.*"—Not "the American system of medical education," as made up to suit the body corporate of the Jefferson Medical College of Philadelphia, but the system of education adopted for the training of students of medicine by the authorities of the State of Michigan, the working of which is intrusted to the faculty of medicine in the State University.

We know of no school in our country whose plan of instruction is more completely adapted to fulfill the designs of its creation than that prescribed for the medical department of the University. Having an active faculty, a six months lecture term, and a course of analytical chemistry, and a course of clinical instruction interposed between the close of one lecture term and the commencement of another, to which the more advanced students are admitted, it seems to us more nearly to meet the wants of students than any other we are acquainted with in the United States.

If the design could be executed faithfully, there would be but few other things to be added, to make the institution as perfect as the popular form of our political organization will admit of. But this is not the case. Of the fidelity of the faculty in the main, we are ready to give our testimony. It gives us no pleasure to speak of the exceptions. But being cognizant of

the evil, we think our duty requires us to point it out, so that it may be talked of and sanctioned, or else suppressed, in compliance with an intelligent judgment. We allude, especially, to the non-residence of a part of the medical faculty during the lecture term at Ann Arbor.

On this subject we have heard complaints. In what way this habit or custom produces evil, we do not propose to speak at this time. We designed only on the present occasion to speak of the fact, not wishing to excite prejudice against individuals by any comments of our own, as to the manner in which the wrong doing is made manifest.—*Peninsular Jour. of Medicine.*

We copy the above article entire, for the purpose of giving *whatever object* the writer may have had in view, the advantage of the additional circulation of the *Independent;* and we should not further notice it, but that it contains an insinuation, which is simply, both *cowardly* and *false.*

As we are the only member of the Medical Faculty, who is not either a resident of, or who does not pass the winter in Ann Arbor, "the exceptions," of which the writer speaks, so greatly at the expense of his "pleasure," (?) refer, manifestly, to us. The writer *insinuates* that we are guilty of infidelity to the University, because of our non-residence, "during the lecture term at Ann Arbor." We do not propose to enter upon a defence, further than to state, that we have never failed, except in one instance, and that in consequence of dangerous and prolonged illness, to give our full quota of instruction (four lectures per week throughout the term), or to fully perform *all* the duties pertaining to our office. The time, too, devoted to our duties *has been in conformity with Faculty action.* If this be *infidelity,* then are we the "exception" to "fidelity" which the *Peninsular Journal* so *manfully insinuates!*

Our object is rather to discuss some of the disadvantages arising from the country location of medical schools. Were not the removal of the medical department to the city of Detroit eminently practicable, and would not the prosperity of that department be vastly enhanced thereby, and that, too, without detriment to the University as a whole, we would not dwell upon this subject. But as we remarked last month, our dearest aspirations are entwined with its interest and prosperity; we were identified with the inception of the medical department, and it constitutes our first professional love. No one has labored more earnestly in its behalf than we. During the first three years of its existence, we discharged the duties of both the surgical and anatomical professorships, and we have ever given

to the work, the best of our poor abilities. We shall therefore, perhaps, be acquitted of overweening egotism, if we claim for our views, respectful consideration.

Country medical schools can never take high rank among medical institutions. Past experience shows not only this, but the more unwelcome fact, that they cannot survive to a vigorous, prolonged existence. Fairfield, Woodstock, Dartmouth, Geneva, Willoughby, and Laporte, are all dead; and yet the Faculties of these schools contained men, who have since been among the brighest ornaments of successful, because more fortunately located institutions. Castleton, Pittsfield, and Burlington, the Faculties of which, all contain able men, are barely able to keep up an organization. Prosperous, they are not, and from the misfortune of location, can never be. The principal reason for the languishing and dying condition of these schools, consists in the absence of clinical advantages, a subject which has been already largely discussed in the pages of this journal. We do not, therefore, dwell upon it now, but would call attention to another difficulty pertaining to country locations, which is suggested by the article above quoted.

The professorships of Practical Medicine, Surgery, Obstetrics and Materia Medica, all *imperatively require* for their incumbents, *practical men*, i. e., men engaged in the daily practice of their profession. *Such men only, are qualified to teach these practical branches.* A single country location does not afford practice sufficient for so many men; hence in all country schools, only a portion of the Faculty reside in the locality of the institution; and the balance are permitted to hurry through their course in eight weeks, to the great detriment of the class, in order to return to the field of their labors.

The University of Michigan prescribes a six months course of instruction, and a continuance of each course throughout the term. To facilitate the working of this plan, our colleagues have "*sanctioned*" (is not the *Peninsular* satisfied with *this* sanction?) our delivering two lectures per day, on two days in the week, thus making out our weekly aggregate; and we have, by returning home by cars in the evening, and performing most arduous labor, been enabled fully to discharge the duties of our professorship, and at the same time, to attend to our practice in Detroit.

Ann Arbor cannot furnish practice *for all the practical men* which it is *necessary* to combine in the faculty of a medical college. It con-

tains about four thousand inhabitants. Does the *Peninsular Journal* believe that it affords a sufficiently ample field of practice for the Professor of Surgery in an important medical college? The University of Michigan pays its medical professors one thousand dollars each for a course of lectures. Does the *Peninsular Journal* believe that such a sum will induce any man capable of filling the chair of surgery, to reside six months of the year away from his practice? We do not judge so poorly of its sagacity; and we earnestly invite the attention of the Boards of Regents to the question which the *Peninsular Journal* has opened. G.

CORRESPONDENCE.

ANN ARBOR, Oct. 9th, 1857.

PROF. GUNN, DETROIT:—I have just read an editorial in the *Peninsular Journal of Medicine*, the object of which appears to be to drive you into a six months residence, in each year, at Ann Arbor.

Two, if not three, out of the *galaxy* of editors of that Journal, are anxious candidates for the honors and emoluments of surgical practice in Detroit.

Will this account for the milk in that cocoanut?

MEDICUS.

NEW YORK, Sept. 17th, 1857.

EDITORS MEDICAL INDEPENDENT:—

At a clinique delivered last Thursday, by Dr. Carnochan, a woman of middle age was presented, in whom had occurred a spontaneous ~~case~~ cure of vesico-vaginal fistula, under the following peculiar circumstances:—It appears that the fistula resulted from violence during a delivery, which was effected on ship-board, two years previously. On applying to the Emigrant's Hospital (of which Dr. C. is Surgeon in Chief), it was discovered that, in addition to the existence of a vesico-vaginal fistula, the case was complicated with a strictured condition of the vagina, and the presence of one or more calculi posterior to the stricture,—thus demanding a double operation. At that time, however, owing to the debilitated and cachectic

state of her system, an operation of any kind was deemed inexpedient; and she was accordingly recommended a tonic course of treatment, aided by a generous diet. After an interval of a few months, her general health had so far improved as to justify an operative attempt to remedy the local disease. On suggesting its expediency to the patient, she informed the Doctor that the urine had lately been passing *per viam naturalem.* It was conjectured that the calculus, or a portion of it, had become impacted in the fistula; but, to the Doctor's surprise, on liberating the stricture, by means of a crucial incision, and removing the calculi (a feat accomplished with difficulty, owing to their size and their having pushed the upper portion of the posterior wall of the vagina downwards and backwards, forming, as it were, a *cul de sac*), he discovered that a spontaneous occlusion of the pathological opening had been effected. It was suggested, in explanation of the phenomena, that the calculi (of rough exterior) had vivified the margin of the fistula, after the manner of a caustic, so that granulations were evolved, whose successive growth had obliterated the fissure (closed the fistula?). The woman appeared in excellent health, and profoundly grateful.

At the same clinique, a male child, *æt* 5, was presented, with ambiguous symptoms of coxalgic disease. Dr. C. remarked, that the importance of the joint, its proximity to the trunk, and the frequency with which it becomes diseased, invested such cases with peculiar interest, while, at the same time, the difficulty sometimes experienced in establishing a diagnosis, rendered it important to obtain, from any and every source, knowledge, whether of a positive or negative character, which would throw light upon the matter. He then adverted to the subject of congential dislocation ("luxation original" of the French), remarking that even Sir Astley Cooper, with his immense means of research, denied the existence of such a pathological condition. The French and Italian surgeons, however, had amply refuted this position; and he exhibited a preparation of the pelvis of a woman (whom he had the felicity of dissecting some ten years since), in confirmation of the fact that original luxation could occur; for the woman referred to had been lame from birth. The acetabula were both obliterated, the capita femorum much diminished in size, the capsular ligaments remaining entire. No other malformation or distortion, of any of the component parts of the pelvis, was discernable. The flexed positon of the thighs *upon* the

abdomen of the fœtus in utero, favored retraction of the psoi and iliaci muscles, while dislocation was further endangered by the shallowness of the acetabulum at that period.

A case of chronic eczema, extending from the knee of an old man down to the toes, accompanied by a decidedly varicose condition of the veins above the knee, well illustrated the truth of a remark made by Dr. C., that the true *causus morbi* was defective (impaired) nutrition—the balance of the circulation being disturbed by the morbid condition of the veins above; that the disease occurred chiefly in the lower extremities, and in persons whose vocation involved long-continued standing—and hence, that if, in this case, a radical cure were contemplated, ligation of the saphena vein would be necessary.* Taking this view of the pathology of such cases, we should not be surprised to find them obstinately chronic—yielding to the horizontal decubitus and other adjuvant treatment in hospital, but soon relapsing when the patient resumed his occupation.

A. G. MERRETT, M. D.

A Small Matter, but an Important one.—*Editors Medical Independent:*—Gentlemen—Permit me to call the attention of your readers to a matter trifling in itself, but, under certain circumstances, great in its results—and these circumstances are in suits for alleged *mal-practice.* I allude to a *natural* difference in the length of the legs, as proved by accurate measurement from a given point on the patella to the internal melleolar process. I have long been acquainted with this fact, though I have no recollection of seeing it mentioned by any one. My attention was first called to it in my own person. I have no fault to find with my *physique*, although it is slight; but there is a difference of nearly one quarter of an inch in the length of the legs. I have satisfied myself by the examination of several friends, and proved it beyond doubt in two cases of fracture above the knee. When the measurement has been carried down to the heel, the difference, in some cases, has been found still greater, from the unequal development of the cushion formed of the integuments and adipose and fibrous tissues on the inferior surface of the os calcis.

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* Your readers will be gratified by referring to a case of Elephantiasis Arabum of the right inferior extremity, successfully treated, by ligature of the femoral artery, by J. W. Carnochan, M. D., in the New York Journal of Medicine, September, 1852.

The application of this knowledge was well exemplified a few days since. I had been summoned to Essex County, in this State, as witness in a suit for mal-practice. Although expected to be the Plaintiff's *man*—my attendance being secured by a subpœna and fifty cents a day!—my feelings were enlisted for the Defendant, a most worthy and capable professional brother. I urged the presence of all the medical witnesses at the time the thigh was examined. One person, very officious, and imported from Vermont for the Plaintiff, constituted himself the *factotum*, and went busily to work, measuring his own way, till he had made out the amount of shortening *three* inches. I now directed how to proceed—the leg was laid on the carpet, the body being placed in as straight a position as possible; a tape line carried from the anterior superior spinous process of the ilium to the internal melleolus, gave a shortening of but two inches and a half. As the fracture was one of the femur, at the union of the middle with lower thirds, no shortening could reasonably be expected to exist elsewhere than above the knee; but what was the surprise of the measurer, and the pleasure of the doctor's friends, when I told him to measure from the patella to the internal melleolar process? It was done, and the result gave a shortening of more than *half an inch* of the leg of the injured extremity. Here was something very unexpected; the main stay of the prosecution was knocked asunder, and the boy only stood upon a leg a little less than two inches, instead of one they had noised about as being three inches and more shorter. The above amount of shortening should have been expected in a bad case of oblique fracture, in a very unmanageable patient, and where it was expected to prove that the dressings had been tampered with. Of this, however, I have nothing to say, as the trial was postponed till next March. Should I be in attendance on the trial, I will forward you a few notes and its results.

In all cases, I would advise your readers not to forget measuring every portion of the extremity; the leg, if it be a broken thigh, and the thigh, if the leg is the fractured part,—and they will find a handsome balance to the account of the defendant.

I remain, Gentlemen,
Very respectfully yours,
HORACE NELSON.

Plattsburgh, N. Y., Sept. 22d, 1857.

A Healthy Location.—A medical friend, in the northern part of the State, writes as follows:

"I reside here in the capacity of a farmer; and there is not sickness enough here, among upwards of eight hundred people, to enable a physician to earn his living—obstetrical cases being almost the only ones. I have not seen a single case of fever, of any kind, within three years; and but three or four cases of pleuritis, and one of inflammation of the brain—and yet I am obliged to attend to all the medical calls, there being no other practitioner here."

S. H. D., Ypsilanti, sends the following "Scarlet Ointment," for glandular swellings:—

R.	Lard,	six ounces.
	Iodine,	one drachm.
	Calomel,	twenty-five grains.

Triturate the calomel and iodine with a small quantity of the lard until well incorporated; then add the lard, and mix. Effect, rubefacient and alterative.—*American Druggist's Circular.*

How a Doctor Looks (to his Patients):—

Three faces wears the Doctor; when first sought,
An Angel's—and a God's the cure half wrought;
But when, that cure complete, he seeks his fee,
The Devil looks less terrible than he! *Ibid.*

Eratta—For October No., page 459, nineteenth line from top, instead of *Magnesium*, (better waters,) read *Magnesia prevails*, (bitter waters.)

In twenty-first line, read. likewise *in most cases*, a metallic sulphide, &c.

In twelfth line from botton, instead of *Magnesia*, etc., read *Manganese*, etc.

Page 460, sixth line from top, for *Sulphate* of Sodium, read *Sulphide* of Sodium. Sixteenth line from bottom, instead of *ferro cyanide* of potassium, read *ferri-cyanide*, etc.

Page 461, thirteenth line from top, instead of *Magnesia*, read *Magnesian*. Sixteenth line from top, instead of white precipitate in any free acid, read white precipitate *insoluble* in any free acid.

Page 463, eighteenth line from top, insert *if* after colon, and read *if* therefore, etc.

THE

Medical Independent,

A Monthly Review of Medicine and Surgery.

EDITED BY

MOSES GUNN, A. M., M. D.,

PROFESSOR OF SURGERY IN THE UNIVERSITY OF MICHIGAN,

AND

L. G. ROBINSON, M. D.

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THE
MEDICAL INDEPENDENT:
A MONTHLY
Review of Medicine and Surgery.

VOL. 3. DETROIT, DECEMBER, 1857. NO. 10.

Original Communications.

ARTICLE I. *Mechanism of Nervous Action.—Reply to Prof. Paine.* By J. ADAMS ALLEN, A. M., M. D., Formerly Professor of Therap., Mat. Med. and Juris. in the Indiana Medical College; and late Professor of Physiology and Pathology, and acting Prof. of Mat. Med. in the University of Michigan.

"Be not deceived, readers, by men that would overawe your ears with big names and huge tomes that contradict and repeal one another, because they can cram a margin with citations. Do but winnow their chaff from their wheat, ye shall see their great heap shrink and wax thin past belief."—*Apology for Smectymnuus.*

Had Prof. Paine been content to have published his article on the "RIGHTS OF AUTHORS" only as an Appendix to the new edition of the "Institutes of Medicine," where it would have been read but by those who had previously fathomed his own ideas upon this subject of nervous agency and mechanism, I would not trespass upon the pages of the *Independent* in animadverting upon it. But it appears, now (*Independent*, Nov., 1857), in a position where a reply is necessary, even though the reply have the effect, undoubtedly intended, of advertising *gratis* the ponderous volume to which it alludes.

Although the irate Professor seems to think that no authors have rights, except those who have written massive

volumes, I shall endeavor, in this article, as heretofore, to condense my ideas into a brief space, even though, to impress upon the attention without "vain repetitions," it may happen that italics and capitals are legitimately employed.

By the kindness of a friend in Detroit, who volunteered a thorough search, I have been permitted, since the announcement of Prof. Paine's article, to read, for the first time, the "Institutes of Medicine," with a steadfast endeavor to find the new doctrines therein. Since the appearance of his article, I have gone over it again, under the guidance of his own references,—and *nowhere* is there the remotest approach, nowhere the vaguest approximation to the real pith and marrow of the new principles under consideration; but, on the contrary, principles are therein taught, as diverse from these as darkness from daylight.

It may happen, that some men have been unduly ambitious of urging recognition of their priority of discovery; that some men have been anticipated in independent discovery; that some have worked out problems in nature, which others have tried in vain to solve, and yet have themselves been unconscious of their high significance. But it is rare that he who has spent his life in establishing certain peculiar views —whose written works are libraries in themselves, encyclopedic in their vastness,—in his ambitious aspirations, should so far overreach himself, as to seize upon ideas utterly repugnant and destructive to the fabric of his life-time's creation, and endeavor to avoid their influence, by urging them as part and parcel of his own thought.

"Sophistry," says an eminent logician, "like a poison, is at once detected and nauseated, when presented to us in a concentrated form; but a fallacy which, when stated barely in a few sentences, would not deceive a child, may deceive half the world, if *diluted* in a quarto volume." The reason of this is evident—a single false assumption will vitiate the conclusion, however many correct statements may be made in connection with it. We shall see that this single false assumption vitiates the "Institutes," as an authority, from title-page to Finis.

Again, we premise another thought, from the high logical authority just quoted:—"The fallacy of References is particularly common in popular theological works. It is, of course a circumstance which adds great weight to any assertion, that it shall seem to be supported by many passages of Scripture: now when a writer can find few or none of these, that distinctly and decidedly favor his opinion, he may at least find many which may be conceived capable of being so understood, or which, in some way or other, remotely relate to the subject; but, if these texts were inserted at length, it would be perceived how little they bear on the question. The usual artifice, therefore, is to give merely *references* to them—trusting that nineteen out of twenty readers will never take the trouble of turning to the passages, but, taking it for granted that they afford, each, some degree of confirmation to what is maintained, will be overawed by seeing every assertion supported, as they suppose, by five or six Scripture texts."* The Appendix shows that Prof. Paine has a clear idea of the power and mode of using the "Fallacy of References"—as I propose to make manifest to the dullest comprehension before I shall have done with this article.

But this is not the only fallacy which Dr. P. has recourse to in the Appendix. Archbishop Whately evidently had the Appendix in his mind, when he wrote that to the "Fallacy of References" the *Ignoratio elenchi* is frequently conjoined. *Assuming* the *parallelism* of two cases, from their being in *some respects* alike, keeping out of sight that they differ in *essential points*, the result is, what Dr. P. arrives at in the Appendix, emphatically an "irrelevant conclusion."

There is a startling coincidence in the fact, that these claims of Prof. Paine were not announced until the death of Marshall Hall, who had fully conceded the claim of Dr. Campbell, and in effect, therefore, of the present writer. By Prof. Paine's *own testimony*, Marshall Hall was familiar with his works.

* Whately's Logic, B. iii, § 10.

The graceful dignity with which Dr. Hall yielded precedence to Dr. Campbell, puts at rest forever the insinuation that he could arrogantly refuse priority to Prof. Paine, if that were his due. We have, then, in effect, Marshall Hall's testimony that Prof. Paine's work—*dedicated* and even *sent to* him by the author—contained none of these ideas. The conclusion is inevitably forced upon the mind, that the New York Professor would never have promulgated *his* "afterthought," had not the great London physiologist been cut down by death. Does he hope to extinguish the present writer more easily, by launching those big volumes at his head?

We will look into this matter a little—and, though wanting the prestige ("*major nomen*") which surrounds the book-writer of New York, and his elevated position in a metropolitan college, we shall not fear justice from an intelligent, thinking and clear-sighted profession. The little modicum of reputation which belongs to the present writer, is as much prized by him, as though it equalled that of the author of the "Institutes of Medicine," &c., &c.; but, beyond this, and infinitely more important, is it that the clear deductions in the present exposition of the mechanism of nervous action should not be confounded with the crude dogmata of the "Institutes,"—dogmata which, at one blow, would strike down everything in the advance of chemical and physical science, which can possibly throw new light upon the causes and phenomena of health, disease and therapeutics.

Nor is this a groundless imputation—for what says Dr. Paine? First, then:

"The Institutes of Medicine are natural inductions of principles and laws from the healthy and morbid phenomena of living beings. They relate to Physiology, Pathology and Therapeutics, and to nothing else. All other systems, therefore, must be spurious."—*Institutes*, § 2, *a*.

"The immediate objects of Physiology are a critical analysis of the vital conditions and results of organic beings, as manifested in different organs, and in their relations to each other."—*Ibid*, § 2, *b*.

"*Chemistry has been a perfect incubus upon medicine; and the time is not far distant when it will have proved, by its own showing, its want of relation to our subject, if it have not done so already.*"—*Ibid*, § 5. (The italics are Prof. Paine's.)

"It is clear that while the laboratory is the proper place for the study of the inorganic kingdom, we must go to the organic being itself to learn the nature of the powers and laws by which it is governed."—*Ib.* § 6.

"When we consider the constant deceptions of the microscope, especially in all explorations of soft substances, and *the absolute uselessness of any knowledge it may convey as to the recesses of organization*, it may be reasonably expected that the time is not far distant when *all this lumber will be excluded* from practical works on physiology, and turned, at least, into a channel by itself."—*Ib.* § 131.

Quotations might be extended *ad infinitum*, or as nearly to it as this almost endless work extends, but it is unnecessary. Its author claims, as an especial merit, that he utterly rejects all physical and chemical science, as having any possible relation to physiology. He investigates phenomena only, and attributes them, in gross, to forces and properties, in every instance utterly distinct from any in physics and chemistry. This is what "is impressed upon these Institutes" and all the author's works and lectures—this is their cardinal and only distinction.

Minute structure is so entirely disregarded, that, from the beginning to the end of this work (*par excellence*—the "Institutes of Medicine!"), there is not an allusion to the vesicle as distinct from the fibre or tube of neurine—there is not an allusion to the vesicular structure of gland, or surface or muscle. *Ab uno, disce omnes*—those who have read my articles on this subject, or listened to my lectures, will see that this is at the very heart and essence of the doctrine.

The relation of the cell (whether of neurine, gland, secreting surface, or muscle) to the fluids and to the nerve conductor, is the very Hamlet of the play—and yet the New York Professor brings it upon the stage as *his* original, with the Hamlet out!

So thoroughly does he despise the very *principia* of physiological science, that, in this November, Anno Domini 1857, he still clings to the exploded docrine of the instruments of secretion being the "extreme vessels," "with open orifices!" (*op. citat.* § 407 *b et seq.*) This theory of their structure and mechanism will explain a point which he slurs over by *ignoratio elenchi* in the Appendix, but which I shall notice in its place.

The generalization, which Dr. Paine now would ante-date, is as follows, viz:—"What I do claim, is the great generalization that the excitor influence is followed by a reflex change, in which the effect is NOT A MOTION, BUT A MODIFICATION OF VASCULAR AND NUTRIENT ACTION. *That this effect takes place by means of the double nervous arc.*" Upon which Prof. P. remarks, that "the whole of this doctrine is impressed upon" divers of his volumes, and has been promulged in all his lectures since 1841.

If so, he has been remarkably unhappy in the use of language—for no such idea is *expressed*, in the Institutes at least, but distinct and emphatic disclaimers of the same.

What I mean, by a "modification of vascular and nutrient action," is fully explained in the same article, in close connection (*vide Independent* for September, p. 384), viz:

"The molecular or integral composition or decomposition, at the distal extremity of the reflex nerve, is the real element—the motion, secretion or change of vascular or nutrient action, production or abatement of inflammation, or other change of the organ supplied by the nerve (reflex), being altogether *secondary or incidental.*"

MARK WELL—the whole effect depends upon the molecular or integral composition or decomposition! And yet Prof. Paine, the Anti-chemist, the Anti-microscopist, the Anti-physicist, always has taught and held these doctrines! "Tell it not in Gath!"

I was writing for thinking men—not for "Appendix"-making *literary-chiffoniers.* But what does Dr. Paine say in his book, to which this strange assertion is an "Appendix?"

"The properties of life are the fundamental cause of all

healthy and morbid phenomena. They are liable to be more or less diverted from their natural state by a variety of causes, and these new conditions constitute the most essential part of disease. This instability of the properties of life is at the foundation of all disease, and even of therapeutics."—*Institutes*, § 177.

"In their highest development, the properties of the vital principle are six; namely, *irritability*, *mobility*, *vital affinity*, *vivification*, *sensibility* and the *nervous power*. They are called vital properties, vital powers and vital forces, but are clearly attributes of a common principle."—*Ibid*, § 183

"Since the perpetuity of organic matter depends upon the vital principle, it is manifest that both were brought into being without the agency of each other."

"The vital properties cannot be generated by matter, since upon them the existence of organization depends; nor is there a single phenomenon that indicates their presence in inorganic substances; *nor can they be produced by the forces of physics*, since they are perfectly incapable of restoring the structure, or even its elementary composition, after the organized matter is decomposed."—*Ib.*, § 170, *a.*

"By nutrition, through the operation of these vital properties, and according to specific plans, instituted by the Creator and to be forever perpetuated by the substituted energy [!!] of the vital principle, all those forms of organic beings, which pass, by almost insensible gradations, from the mushroom up to the gigantic tree, and from the microscopic animalculæ to the majesty of man, are maintained, in all their exact peculiarities, in all their analogies to each other, in all their vital and moral attributes.

"Such, and far more, is the *wonderful power*,—a power substituted for the *Creator Himself*—which directs capillary circulation, and governs the process of nutrition in the development of the embryo, in the maturity of the being, and in the perpetuation of the species."

"Briefly, then, the whole essential philosophy of organic life—all that is important, or useful, or dignified, in medicine—is directly relative to the vital constitution and the vital actions of the formative and secretory vessels. *Here is the labyrinth of life, here of disease, here the ultimate aim of medical philosophy.*"—*Ib.*, § 411 (Dr. P.'s italics).

These propositions the "Institutes" claims to establish by legitimate "induction," and a large number of *phenomena* of health, disease and therapeutics, are brought forward in

evidence of their truth. Observing the multitude of phenomena, explicable on the hypothesis of a vital principle "substituted for the Creator," he claims the operation of that vital principle in "reflex action" as a scientific generalization. But, to the careful student, it is unnecessary to observe that this is anything but the inductive system, and is, in fact, but gigantic dogmatism, upon the basis of a loose and painful collection of instances, without philosophical distinction of the *essential relations* of the phenomena. In my generalization, these *essential relations* are distinctly and unequivocally pointed out.

Commenting upon Liebig's celebrated dictum that "every motion, every manifestation of force, is the result of the transformation of the structure or of its substance" (*id est*, "molecular or integral composition or decomposition"), the author of the "Institutes"—who *now* claims that "the WHOLE of the foregoing doctrine is impressed upon the *Medical and Physiological Commentaries*, and upon half the pages of these Institutes, and has always been taught in the author's lectures, since 1841,"—says:

"But I will merely present, in relief, from Liebig's revolutionary work, a doctrine of the chemical school, from which, if I mistake not the ambition of intellectual beings, the very impulse of nature will turn the most indifferent with a LOATHING AVERSION."—*Ibid*, § 349, *d*.

Could Dogberry himself have surpassed this? And yet this author ventures to thrust in the foul and calumnious insinuation that I have evinced a "partiality for the author's writings, or for his lectures!"

The real objects of Marshall Hall's generalizations were quoted in the November number of this journal. To these, Dr. Campbell claims to add the discovery of a system of nerves exciting secretion by reflex action—"the excito-secretory system." My own claim was somewhat different from either. Recognizing the full claims of Hall, as to the discovery of the *phenomena* of excito-motory action, I was equally willing to attribute to Dr. Campbell *independent*

though subsequent discovery of the *phenomena* of excito-secretory action; but, carrying the investigation beyond either of the gentlemen named, I reduced the two noticeably and remarkably diverse effects to a uniform law, pointing out the *essential relations* which caused them to be merged in one mechanism, then seen to extend to, and include, all the phenomena of nervous relation.

I will, for the benefit of those whose respect for the age and position of the author of the "Rights of Authors" may still lead them to entertain a lingering doubt upon the matter, re-word the sense of my proposition, which that writer "gambols from."

The local change by the counter-irritant, or whatever physical or chemical cause, is conducted by the nerve fibre to the vesicular nerve centre, there inducing molecular or integral composition or decomposition, which, again, affects the organ supplied by a reflex nerve from that part, there producing other molecular or integral changes, the effect of which changes varies according to the *structure* and *condition* of the organ reached.

Thus, the effect produced may either be *motory*, *secretory*, *sensitory*, *perception* or *intellection*; or there may be production or abatement of inflammation, or other change of condition—the effect being altogether *secondary or incidental.*

"Secondary or incidental" to what? To the molecular or integral changes of structure—composition or decomposition, —a doctrine which our medical Salmasius of the "Institutes" can only look upon with "LOATHING AVERSION!"

But secondary or incidental to what, according to the "Institutes?" To the "*sensibility*" and "*nervous power*"—"vital properties," "attributes of the vital principle or vital force." By reflex nervous action "these Institutes" understand only the operation of "nervous power and sensibility" —precisely as the alchemists of antiquity recognized in the mixture of an acid and carbonate the "property of effervescing."

It is a little surprising that this author does not look after

the "Rights of Authors" of the Paracelsian era; and, when the moderns talk about the theory of atoms and the law of definite proportions in combinations, that he does not insist that "the whole of these doctrines is impressed upon" the works of the alchemists.

The office of the nerve fibre, according to the new doctrines, is simple conduction, by which the condition of one extremity, chemically and physically, is brought to influence the condition, chemically and physically, of the other extremity. Stripped of all incomprehensible "properties," it falls into the same category with the wire of a battery.

But here the "Institutes" triumphantly asks: "How can the impression be reflected definitely upon a particular part?" Briefly, because it is anatomically connected with that part.

We need to call upon no Ariel, or other tricksy spirit, to "put a girdle round the earth in forty minutes," when we can *telegraph* in the twinkling of an eye: we need invoke no familiar demon, to be "substituted for the Creator" here.

Now, what is the explanation of the action of a blister upon the chest, as given by Dr. Paine? *Vide* § 201, *d*, Institutes, —where it is assumed that the impressions made upon the vital property, "sympathetic sensibility," are transmitted to the brain, spinal cord or ganglionic centre, and there give rise to the development and transmission of the "nervous power" through *motor nerves, thus inducing* MOTIONS. (*Vide* also § 227, for same idea.) But, in § 223, he qualifies this by saying that the "nervous power" does not generate motion, either in animal or organic life—"It only influences the organic property, *mobility*, upon which all motion depends, through the medium of *irritability*." (Two more Richmonds in the field!)

Properties again—all properties.

"However complex and *destitute of analogies*, in the world of mere physics, this phenomenon may be, I have no doubt that the solution [!] which I have offered will be received by every philosophical mind which may attentively consider

the *nervous power*, *in its connections with the motor nerves* and the experiments of Wilson Philip."—*Ibid*, § 233.

But § 224 informs us definitely:—

"The phenomena of contiguous sympathy, as when inflammation of the liver, the lungs, &c., is relieved by blisters over the region of the affected organs, can *hardly* be traced throguh the mechanism of the cerebro-spinal system, though they may *perhaps* through the medium of the ganglionic nerve"!

Take, with this, sections 11, 12 and 13 of § 516, *d*, where the phenomena of the ganglionic nerve are discussed, and again and again considered as *motor*, with no glimpse of any further reflex action, exeept in so far as dependent upon motion—and, throughout the whole section, wherein the ganglionic is all along considered in this light only—and we can no longer wonder that this same author urges, in page after page of argument, that the heart has a power of active dilatation, and wondrous suction "properties."

Again, § 222, *b*, where *motion*, produced by the "nervous power," is held to embrace all the phenomena of sympathy induced by morbific and remedial agents, and hence, of course, of the blister.

"The nerves of the ganglionic system have only an involuntary motor influence upon the parts to which they are distributed."—§ 470.

But, in § 475, he qualifies this by saying that the nerves are not the causes of motion, as that is the immediate result of the action of the organic properties mobility or contractility—the motor influence of the nervous power acts upon the properties. "The term *excito-motory* is far preferable to *motor*; and *sensitive* it would be difficult to improve." Still, the production of motion is the foremost idea, and the reader can only get a glimpse of the mechanism he defends, by recollecting that he believes all nutrition and all secretion to be accomplished through the medium of "extreme vessels with open orifices," which are the subjects of mobility. This is the meaning, if he have, in fact, any clear idea at all.*

* This is distinctly suggested in Paine's essay on "The Soul and Instinct."

Now, then, we are clear of the § §, and can take an observation. The cantharides, according to the Paine theory, is not absorbed to produce its effect, either locally or remotely, but acts on the "*sympathetic sensibility*," calls up the "*nervous power*," thereby arousing "*mobility*" by acting on the "*irritability*" of the finally-influenced organ. This is the Paine-ful conclusion.

If the bladder becomes affected by the cantharides, it is by a "modification of the nervous power," whereby it "actually acquires the virtues of an inflammatory agent," and (I am not writing a satire, but quoting), neglecting all other organs, affects the "sensibility and irritability" of the bladder!

And this is called the "Institutes of Medicine,"—which is to put down humoralism, explode organic chemistry, and utterly overthrow the doctrine of the operation of remedies by absorption!

"*The cantharides*," says Dr. P., "*supply an apt illustration of the whole philosophy of our subject.*"

Now, then, I appeal to every sensible mind whether that philosophy is any kin to that which my article of September contains, and from which that "paper philosopher," quotes? There are some to whom I shall appeal in vain, but who, like old Polonius, will still insist that the cloud is "very like a whale!" But candid men must say, that between the modernized theory of Stahl and Van Helmont, of the author of the Institutes, and the simple statement of the laws of action of the nervous mechanism or apparatus, of the present writer, the distinction is clearly VITAL.

In my view, the epispastic, or other counter-irritant, acts locally, by slow absorption, and production of molecular changes in the fluids—and, of course, in the solids (by cell action, partly or wholly,)—or by direct physical and chemical changes, with resultant compositions and decompositions. Then follow nervous conduction, central change and reflex action, in the manner previously indicated. If the cantharides affect the bladder, it is by absorption of the active principle of the fly, precisely as though the application had been made to the stomach.

There is nothing in the new doctrines which contravenes, in the remotest degree, the operation of remedies by absorption—there is nothing in them which contradicts the enlightened humoralism of the day. The assertion of the New York Professor, and his idle assumption, that, by their exposition, his "solitary position is becoming relieved," simply indicate that he either does not or will not understand their import.

We implicitly recognize the operation of medicines by absorption; and the view is no more inconsistent with these doctrines, than the fact, by his own theory, which he dwells upon, that the "organic properties" are independent of the "nervous power," is opposed to the occasional influence of that power, in accordance with the exigencies of animal life, in modifying those properties.

The absorbed medicine reaches the profoundest recesses of the organic frame—the *locally* absorbed medicine influences distant parts in the manner we have set forth. These two modes of operation are nothing more than we might expect, from the meeting of organs endowed both with organic and animal characteristics. In both cases, the result harmonizes beautifully with the splendid generalization of Liebig, to which we have already reverted, and illustrates, in the most striking manner, the natural tendency of great truths to blend in unison. *Principia prima* are the footsteps of Nature treading in different paths.

It was very well worth the while of Prof. Paine to illustrate the "Rights of Authors" by directly misquoting the author whom he reprehends in his "Appendix." Not content with merely garbling to suit his own peculiar wishes, and basely insinuating atrocious charges to meet his own ambitious views, he bodily changes the wording of a quoted sentence, so as to pervert its entire meaning. After reproducing my induction from the action of counter-irritants, he makes the reading as follows, viz: "The oral elaboration of this principle was suggested by an idea (?) which does not,

Correct Reading.

"In the oral elaboration of this principle was suggested

even now, appear to have occurred to either M. Hall or Dr. Campbell, viz:" &c.

an idea which does not even now," &c.

By turning to the September number of the *Independent*, p. 384, the effect of the misquotation will be apparent to any one who reflects upon the matter a moment. Correctly read, it means that the "oral elaboration" was in *explanation* of the generalization—it *included* the idea suggested as original, and determined the sense in which the generalization was to be understood.

Dr, Paine's reading makes the simple statement of the idea, which he inserts *without my explanation* (in the very next sentence), to be the groundwork of my generalization. The detached sentence in italics, without the explanatory sentence, especially after his misquotation, looks as though it might mean something a little like what is written in the "Institutes, § 893, *e*, pp. 646 and 647, to which he refers. With the explanatory sentence, it is *utterly unlike in interpretation and effect.*

Precisely as in the case before given, I make the reflex effect secondary or incidental—which is also intimated in "§ 893, *e*," where the effect is attributed to "a modification of the nervous power in *great conformity* with the nature of the causes by which it is brought into operation," nevertheless "*under the influence of its own nature*!"—"*Vide* § 228 *a.*"

And this is the nearest approach to my language (and the language is nearer than the idea) in the whole paragraph, which the metropolitan book-maker so triumphantly flaunts as containing "nearly the foregoing language of Dr. Allen!"

I need not repeat what I have already stated, as to my explanation of the terms "secondary or incidental," in the connection in which I have used them. Suffice it to say, that neither in word nor idea does "§ 893, *e*, pp. 646 and 7," or any other paragraph or page of "these Institutes," touch or approximate even the expression he detaches with his critical scalpel from my article.

I am at a loss to explain such serene indifference to naked

veracity of statement, upon the part of this "Appendix"-maker of literary and professional calumny.

There was a Paine who startled all New England with a tale of pistol-shooting and robbery, of which he claimed to be the victim—the police, I remember, ascertained pretty conclusively that he had neither been robbed nor shot at. There was a Paine who illuminated the world with gas manufactured from pure water—and he created a sensation, even in Europe.

In this "Appendix" on "Rights of Authors," we have the history of such another robbery, and in "these Institutes" we have equal light.

It appears that this author cares most for the injuries he has received at European hands, although he devotes nearly the whole of the "Appendix" to myself.

He who cannot see any difference between the exact, careful and beautiful experimentation of Bernard, and the rough, gross, not to say loose and questionable, essays of Wilson Philip—who attributes to Prochaska the establishment of the theory of reflex nervous action, and barely admits that to this "Marshall Hall and others have made *some contributions*!"—(§ 463, *b*,) ought to rest content with laurels gathered from the eastern hemisphere, when their mental powers were more appreciative. But this writer even *prefers* the experiments of Philip to those of Bernard!

Does this simple statement need any addition, to show that he is utterly oblivious to the real facts at issue?

As to the use of the terms "depressor" and "alterative," in connection with this subject—and which Prof. Paine proves, by a shower of § §, that he has used throughout his works—the present writer has never claimed them as original, but, on the contrary, says expressly, in the very article commented on and inveighed against: "Pathologists and therapeutists have been obliged to recognize something more than the mere increase or diminution of action." Are we to understand Prof. Paine as claiming that idea as original in "these Institutes?" The veriest tyro knows that the terms

have been employed years upon years, even before 1840 or the era of the "Commentaries." But the application of them by us, respectively, is as diverse and antipodal as the doctrines we individually espouse.

A few points more, and I have done with the "Institutes."

Throughout the work, he objects to the application of physical and chemical principles to explain the phenomena of life. The idea is very broadly intimated, that all that man can ever do, in this study, has been done in the author's works and lectures.

An abstract, immaterial force "substituted for the Creator" (§ 411), "analogous to the soul" (§ 175, *b*), but, like light, possessed of distinct attributes, controls and governs the animal frame in all its operations and derangements (according to the perfected system of laws laid down in the Institutes, and not elsewhere, as the work is copyrighted). All other views are "materialistic," and of "infidel tendency."

"Certain external impressions, of a mechanical or chemical nature, and divers organic matters, vegetable and animal poisons, are able to ANNIHILATE *this power*, and thus cause the death of the living bodies on which they operate."—§ 167, *d*. (The capitals and italics are Dr. Paine's.)

This power, this force it is, which the "Institutes" demands us to receive as the ultimate principle, to which all physical and chemical principles must succumb, or else be branded as *materialists*!

A power which—"substituted for the Creator" (by Dr. Paine), "analogous to the soul,"—is *capable of being destroyed by material agencies*—a force which can be ANNIHILATED! This is the entertainment to which the "Institutes" invite us.

But we remain content to believe, with all sound philosophy, that "no force is, or can be, lost or annihilated."

We are content to believe that the subtle force of the immortal soul comes in to influence the changes of the material organism, through its own channel, the vesicles of the brain, as the immortal force of light comes in at the retina.

We are content to labor, in our humble way, to wrest more and more of the modes of operation of the organic and animal apparatus from the sway of the occult creative demon, "capable of annihilation,"—to be comprehended under those powerful forces of the natural world which are eternal in their operative effect.

We are content to continue in this field of effort, notwithstanding the sneers of superficial reviewers, and the overweening insolence of shallow and obtuse delvers among the ooze and slime of antiquity.

Meanwhile, we may admit the terms "vital property," "vital action," &c., to indicate discoveries yet to be made, and not to set them up as pillars of Hercules, beyond which there shall be no more inquisitive search.

Not only have we failed to find anything of the new doctrines, now in controversy, in the Institutes; but we have failed to find a single advance upon the hypotheses of Stahl and Van Helmont. Prof. P. himself explains Stahl's meaning to be, in effect identical with his own belief (§ 167, *e*,). If these doctrines are comprehended in the Institutes, then have they been involved in the oldest recorded hypothesis: if these doctrines are "impressed upon" the Institutes, and from thence we have derived them, then are we entitled to more credit than though we had photographed them from the mere chaos of nature and experiment,—for the latter task were infinitely less difficult. Our vital principle, in such case, must surely have been "substituted for the Creator."

So sensible is Dr. Paine of his own views being but an elaboration of those of antiquity, that he devotes a considerable portion of his work to an argument to prove the literal truth of Solomon's statement, that "There is nothing new under the sun!"—§ 376 3-4, *a*.

There is another point of view in which the "Institutes" makes the pedantic quotation from Juvenal (from the Dictionary of Quotations?) rebound, with ten-fold potency, upon the author of the "Appendix." It is, the fundamental admission of what the *Hahnemanidæ* "would purchase with a great

price;" viz: that the operation of all medicines is dynamical —that they do not produce their effect by direct material changes in the tissues, but by operating, in virtue of their own peculiar nature, directly upon the "vital principle,"—the "creative intelligence" of Stahl—the immaterial entity of divers attributes, "substituted for the Creator," "analogous to the soul" and "capable of annihilation," of the amiable author of the "Rights of Authors." Hahnemannism is the logical sequence of the vitalism of Paine imaginings. (*Vide* § 505 and § 870, *aa.*)

"*It is due to truth*," says this medical instructor in a metropolitan college of high rank, "(*fiat justitia, ruat cœlum*), *that the physiologist concede to the homœopath, that his hypothetical views may be directed by an enlightened understanding of the properties and laws of healthy beings. Upon that ground, indeed, his hopes can alone repose; and even his doctrines in pathology and therapeutics are a thousand-fold better, more rational, more consistent, more conducive to health and to life, than any or all the tenets of the chemical and physical schools. With the one there may be a great deal of misapplied philosophy; with the other there is certainly none at all*"—(§ 878).

What more is needed than this *reductio ad absurdum*, this "lame and impotent conclusion," to demonstrate the sheer incompatibility of the teachings of the Institutes with those which have commanded our attention, and to which the author of that lucid work now lays claim?

We are about to leave this subject. It may appear to some readers that we have been unnecessarily severe upon the author of the "Appendix." But, in our view, the case was one which demanded the expression of sentiments of indignation, in terms much harsher than are employed in this article.

Beyond the gross violations of professional courtesy, and even ordinary literary honesty, there is assumed by this "Appendix"-maker a tone of arrogance and offensive assumption which not even his years or position can excuse. The utterly atrocious and wanton insinuation of direct or indirect plagiarism, I have shown to be as baseless as the fabric of a vision.

Pretending to care more for European neglect to do him homage, he nevertheless levels almost the entire Appendix at myself.

> "But as some muskets so contrive it,
> As oft to miss the mark they drive at,
> And, though well aim'd at duck or plover,
> Bear wide and kick their owners over;
> So fares our *Paine*, whose reasoning toil
> *Does thus* upon himself recoil."

The covert sneer and labored sarcasm of the "Appendix" have exploded in his own fortress—

> "The engineer is hoist with his own petar."

I leave him to the "solitary" enjoyment of his own murky vitalism, to coin new calumnies for other appendixes, and venture *his* "afterthoughts" upon the tide of medical progress, at his leisure.

Kalamazoo, Nov., 1857.

ARTICLE II. *Reform in Weights and Measures.* By FREDERICK STEARNS, Pharmaceutist.

"In order to secure the greatest amount of convenience and utility in calculations connected with commerce, it is self-evident that the SCALE OF NOTATION, the SCALE OF MONEY, and THAT OF WEIGHT AND MEASURE, SHOULD BE BASED UPON ONE COMMON PRINCIPLE. OUR MONEY SCALE, like the SCALE OF NOTATION, IS ALREADY on the DECIMAL PLAN, and the last-named is so firmly established throughout the civilized world as to be unalterable; and all that remains for us is to make the scales of weight and measure harmonize with it."*

The necessity for a reform in our present standards of weight and measure—a reform based upon the adoption of the decimal system—is admitted by every one whose business transactions compel them to employ those now in use. More particularly is it felt by the compounder and prescriber of medicine, and especially by the pharmaceutist; for he buys and sells by one standard of weight, compounds and dispenses by another, purchases liquids by standards perhaps legal only in the place of purchase, sells them by that one which is legal in his own State, while he dispenses them as medicine by yet another one.

* Report of M. Lefferts to the New York Chamber of Commerce.

The initiatory steps towards this reform have been taken by various scientific societies and commercial associations, in appointing committees to consider upon the best means of securing a decimal arrangement, applied to the scale of weight and measure, and to endeavor to find one practicable in its adaptability to the wants of commerce, and available in the ease with which it may be made to supersede the present standards, by not involving too wide a departure from present well-known quantities.

From several several reports which I have read, it appears that a plan proposed by Mr. J. F. Felton, of New York, is recommended—one which is the result of 17 years labor in this hitherto unfruitful field, and to which, in its general principles, I give my unqualified admiration. But as the adoption of any new system is worthy of previous careful consideration, and it is incumbent upon all who feel interested in the subject to give their views, if differing from those offered the public, the writer is led to submit the following remarks in regard to the UNIT proposed in the plan alluded to.

Mr. Felton proposes, in his plan, not to disturb the most important commercial weight now employed—the avoirdupois pound of 7000 grains,—but to adopt it as the unit in his new system, and to create the scale by decimal divisions and multiples of this weight, using in the scale names now employed for nearly similar weights.

The three orders of weight—Troy, Apothecaries (the pound in each being 5760 grains), and Avoirdupois (the pound being 7000 grains)—he supersedes by the establishment of one, the scale as follows:

				EQUIVALENT IN PRESENT STANDARDS.
		1 grain	=	7-10 of 1 grain.
10 grains	=	1 scruple	=	7 grains.
10 scruples	=	1 dram	=	1 1-6 drachms Apoth.
10 drams	=	1 ounce	=	1 ounce 3 dr. 2 sc. Apoth. 1 ounce 262.5 gr. Avoir.
10 ounces	=	1 pound	=	1 pound Avoirdupois.
10 pounds	=	1 stone	=	5-7 of 1 stone.
10 stones	=	1 hundred weight		less than cwt. by 12 lbs.
10 hundred weight	=	1 ton		" ton by 1240 lbs.

In the above scale, it will be seen that the pound (commercial) alone remains unchanged—the grain being reduced to the ten-thousandth part of the pound, or seven-tenths of the present grain.

Now, I differ from Mr. Felton in regard to the practicability of adopting the Avoirdupois pound as a unit, and propose, in place of it, the grain now employed; because, while I admit that the Avoirdupois pound may be the most important weight of our standards in ordinary commercial transactions, yet I believe, if the present arrangement is to be disturbed at all, and one be adopted similar to Mr. Felton's, that the standard grain, the present *unit*, should be the unit in the new system—

First—Because it is alike in all the systems we employ, while the Avoirdupois pound is the pound of no other scale used in this country.

Second—I believe the grain to be the most important of the divisions of weight which we employ, on account of its use in estimating the power and effect of remedies—it being a guide in prescribing and dispensing;—and upon it, and other attenuated weights, are constructed all our medical formulæ.

Third—I consider that, by employing the grain for the unit, the reduction of the old systems to the new one is much easier, being easily made without the aid of written figures, —in fact, by a method which Mr. Felton has pointed out, reduction is almost done away with—which method does not apply to his scale with equal facility.

Here is the scale, with the standard grain for a unit:

				EQUIVALENT IN STANDARD WEIGHTS.
		1 grain	=	1 grain,
10 grains	=	1 scruple	=	½ scruple (Apoth.),
10 scruples	=	1 dram	=	1⅞ drachms (Ap.), 1 dr. 2 sc.
10 drams	=	1 ounce	=	2 ounces 2 scru. Apoth. 2 ounces 125 grs. Avoird.
10 ounces	=	1 pound	=	1 lb. 8 oz. 6 dr. 2 sc., Apoth. 1 3-7 pound Avoird,
10 pounds	=	1 stone	=	1 stone 2 6-7 lbs. Avoird.
10 stones	=	1 hundred weight		excels cwt. by 30 6-7 lbs.
10 hundred weight	=	1 ton		less than ton by 811 3-7 lbs.

In the above scale, the pound contains 10,000 standard grains, instead of 10,000 grains of the value of only seven-tenths of the present standard—which I am led to believe just as practicable for commercial purposes, and much more available for ours. Reference to the following table shows the relation between the different scales:

SCALE OF STANDARD WEIGHTS.	EQUIVALENT IN POUND-UNIT SCALE.	EQUIVALENT IN GRAIN-UNIT SCALE.
1 grain	= 1.3 grains	= 1 grain
1 scruple, Apoth.,	= 2.6 scruples	= 2 scruples.
1 drachm, Apoth.,	= 7.8 scruples	= 6 scruples, or .6 of one dram.
1 ounce, Apoth.,	= 6 dr. 2.4 scrup.	= 4 dr. 8 scrup., or 4.8 dr.
1 ounce, Avoir.,	= 5 dr. 68.75 grains	= 4 dr. 37.5 gr.
1 pound, Avoir.,	= 1 pound	= 5 oz. 7.6 dr.
1 pound, Apoth.,	= 7 ounces 4.88 dr.	= 7 ounces, or .7 lb.
1 stone	= 1.4 stones	= 9 lbs. 8 oz., or .98 stone.
1 cwt. (112 lbs. Av.)	= 1.12 hundred weights	= 7 stones 8.4 lbs., or .784 cwt.
1 ton (2240 lbs. Av.)	= 2.240 tons	= 1 ton 5 sto's 68 lbs, or 1.568 tons.

It will be seen that the reduction of the attenuations of the standard weight into the grain-unit scale is unattended with the inconvenient fractions which accompany that of the pound-unit scale.

Moreover, *if any quantity of Avoirdupois, Troy or Apothecaries' weight be reduced to grains, the figures which express that number of grains show the number of any denomination of the grain-unit standard contained in that quantity.* Thus, 37 pounds, 11 ounces, 7 drachms, 2 scruples and 14 grains (Apoth.) is equivatent to 218,874 grains, either of the Troy, Apothecaries, Avoirdupois or grain-unit standard. Now, this can be read, by the decimal arrangement of the grain-unit scale,—2 stones, 1 pound, 8 ounces, 8 drams, 7.4 scruples; or 21 pounds, 8 ounces, 8 drams, 7.4 scruples; or 218 ounces, 8 drams, 7.4 scruples; or 2,188 drams, 7.4 scruples; or 21,887.4 scruples.

In order to reduce, as above, the standards now employed to the pound-unit scale, when the numbers indicate a quantity of a division less than the pound Avoirdupois, that quantity must first be reduced to grains, and then be converted into grains of the pound-unit scale, by adding to each 3-10 of a standard grain.

It is evident that, in employing a *decimal* arrangement of the scale, the reduction of a quantity of one division to that of another becomes a nullity, when it is remembered *that the figures used to express any quantity show the number of any denomination contained in that quantity*, as shown by the example given above.

Having shown why it appears to me that Mr. Felton has overlooked the imporance of the standard grain, in pharmacy and medicine, in his desire not to disturb the current of commercial transactions, and considered the advantages afforded by the grain-unit decimal scale,—let us look at the system of Measure of Capacity, in his plan.

He takes one-eighth of the New York dry bushel for the unit of measure—this contains ten pounds, Avoirdupois, of distilled water at 60° F. This unit he terms a gallon—corresponding with the "stone" of the pound-unit scale of weight. The divisions and names in the scale are as follows:

10 grains	equal	1 scruple.
10 scruples	"	1 dram.
10 drams	"	1 gill.
10 gills	"	1 pint.
10 pints	"	1 gallon.
10 gallons	"	1 anker.
10 ankers	"	1 tun.

—thus making the pound-unit scale to equal, in distilled water at 60° F.,—

1 grain	equals	1 grain.
1 scruple	"	1 scruple.
1 dram	"	1 dram.
1 ounce	"	1 gill.
1 pound	"	1 pint.
1 stone	"	1 gallon.
1 hundred weight	"	1 anker.
1 ton	"	1 tun.

Now, to establish a similar uniformity between the standard of measure and the grain-unit system, it requires that we should have a minim measure, corresponding, in distilled water at 60° F., with the weight of the grain, and that this minim be the unit for measure—the scale and names as follows:

		IN WEIGHT.		IN MEASURE.
1 standard grain	=	1 grain	=	1 minim.
10 standard grains	=	1 scruple	=	1 fluid scruple.
100 "	=	1 dram	=	1 fluid dram.
1,000 "	=	1 ounce	=	1 fluid ounce.
10,000 "	=	1 pound	=	1 pint.
100,000 "	=	1 stone	=	1 gallon.
1,000,000 "	=	1 hundred weight	=	1 anker.
10,000,000 "	=	1 ton	=	1 tun.

It is an advantage to have the number of divisions in the scale of measure correspond with the number of those in the scale of weight, and that the corresponding divisions of both should *weigh* alike in water, from the fact that most liquids in common use—milk, wine, oil, etc.,—are of nearly the same specific gravity as water at its ordinary temperature—near enough for commercial purposes,—while expensive liquids, of varying specific gravity, and powerful liquid medicines should be bought and sold by *measure* only. It will be noticed that, in the last table, the minim is preserved in the scale of measure and made a fraction over .5 of a grain heavier than the standard minim (Apoth.), while, in the previous one, the drop or minim is discarded. I deem the minim an important item in the scale of measure; and, when made to correspond with the grain in weight, quite as appropriate to adopt for a unit of measure as the eighth part of the New York dry bushel—which bushel is not a standard in many other States.

The following table shows the relative value of Apothecaries' and minim-unit standard measures, in distilled water at 60° F. :—

1 minim	=	.9493 of 1 minim.
1 fluid drachm	=	.569 of 1 fluid dram,—about 5.7 scruples.
1 fluid ounce	=	.455 of 1 fluid ounce, or 4 dr. 5.5 scruples.
1 pint	=	.7291 of 1 pint, or 7 fluid oz. 2 fluid dr. 9.1 scr.
1 gallon	=	.58328 of 1 gall., or 5 p'ts 8 fl. oz. 3 dr. 2.8 scr.

—and, by comparing the following table of Apothecaries' measure—

		1 minim	=	.9493 grains.
60 minims	=	1 fluid drachm	=	56.9 "
8 fluid drachms	=	1 fluid ounce (480 m.)	=	455.6 "
16 fluid ounces	=	1 pint (7680 m.)	=	7291.1 "
8 pints	=	1 gallon (61,440 m.)	=	58328.8 "

—with that given, with the liquid grains for a unit, the con-

trast shows the glaring ununiformity of the latter and the simplicity of the other.

Now let us see the beautiful uniformity of correspondence between the systems of decimal weight and measure, and our present currency—taking for example an article, liquid or solid, valued at one dollar per ounce:

1 grain,	or	1 minim	costs	1 mill.
1 scruple,	or	1 fluid scruple,	"	1 cent.
1 dram,	or	1 fluid dram,	"	1 dime.
1 ounce,	or	1 fluid ounce,	"	1 dollar.
1 pound,	or	1 pint,	"	1 eagle.
1 stone,	or	1 gallon,	"	10 eagles.
1 hundred weight,	or	1 anker,	"	100 eagles.
1 ton,	or	1 tun,	"	1000 eagles.

I would, in conclusion, refer those interested in this much-needed reform to the sources which have led to the foregoing remarks—the report of M. Lefferts to the New York Chamber of Commerce, and that of Dr. Guthrie to the American Pharmaceutical Association. These contain—together with matter not appropriate for comment in a paper of this kind—interesting historical information, and many unanswerable arguments in favor of the early introduction of the decimal arrangement into our scales of weight and measure.

ARTICLE III. *Selection from Surgical Notes.—Exsection of the Head of the Humerus.* By MOSES GUNN, M. D., Prof. of Surgery in the University of Michigan.

In the August number of the *Western Lancet*, Prof. Blackman reports an operation of exsection of the humural head, made by him, in the Commercial Hospital, in June last,—prefacing which, he remarks as follows:

"Notwithstanding the numerous instances which have since occurred on the Continent of Europe and in Great Britain, according to Prof. Smith, of the University of Pennsylvania, this operation has not often been performed by surgeons in the United States. In his System of Operative Surgery, bearing date of 1855, vol. II., p. 383, he remarks that the only cases he has found reported were, one by Dr. Hunt, of Washington, D. C., and another of a partial charac-

ter by Dr. Pinkney, of the U. S. Navy. My distinguished friend, Dr. Chas. Tripler, U. S. A., has given me the details of one in which he successfully operated; but besides these, I am not able to refer to any in the practice of American surgeons."

Had Prof. Blackman turned back to the April number, for the current year, of the *Medical Independent*, he would have found two cases of this operation, reported by myself,—one, made in the winter of 1850–51, the other, in Dec., 1854. In both of these cases, the wound healed very rapidly, the patients being discharged at the end of the second week. Each retained very tolerable use of the arm, and illustrated the beauties of conservative surgery.

I am now able to report an additional operation of exsection of this bone, which I made on the 5th inst. W. W. W., aged 29 years, was suffering from a carious condition of the head of the humurus, of some months standing. From the proximity of the joint, it was feared that the disease had extended into it that cavity. The operation was, however, in its first stages, only exploratory. An incision was carried, from over the accromion, downwards, dividing longitudinally, the deltoid muscle, which was raised from the bone, thus exposing the diseased surface, an examination of which, betrayed extensive communication with the joint. The incision was now extended, the capsular ligament divided, the head of the bone dislocated, and its surgical neck sawn through. Only one vessel required ligature. The wound was closed by seven sutures, and tepid water dressings were applied. But little febrile reaction supervened. The sutures were removed on the fourth and sixth days, when perfect union had taken place, except at a point corresponding with the fistulous opening. A generous diet, with ale or porter, supported the patient after the first three or four days from the operation. At the present date—three weeks subsequent to the operation—the wound is entirely closed, except at the original fistulous opening, which is nearly filled up. The discharge is but trivial, and the patient is attending to his business.

It will be noticed that in this case, as in one of the two previously reported, a single straight incision only was used. This form of incision is abundantly ample, and far preferable to the flap or angular form, as it exposes less surface, and leaves less work for nature to accomplish in the healing process.

87 *Shelby St., Oct. 26th*, 1857.

ARTICLE IV. *Chapters from an Unpublished Monograph.*
By H. R. SCHETTERLY, M. D.

Pulsation an Effect of Discharges of Electricity on the Sympathetic Nerves.—Most physiologists have supposed that the pulsation of the arteries is owing to their dilatation, caused by each contraction of the left ventricle of the heart. Some attribute it to an alternate dilatation and contraction of the arteries themselves; and Bichat and Weitbrecht, to the locomotion of the arteries. All these suppositions are effectually refuted by Bichat himself, who cut out a piece of the carotid artery of an animal, and substituted an inert tube for it, when, lo! the same kind of pulsations were felt in the tube as in the artery. To the tube he adapted a bag of gummed taffeta, so as to simulate an anurismal tumor, and the pulsations were evidenced in the bag.

Doctors Young and Parry think the pulsations are produced by the sudden rush of the blood forward in the arteries, without distension—the existence of which they deny; and others, again, suppose the impulse of the heart's contractions to be transmitted through the blood as through a solid body. If either of these suppositions were true, the pulse should be always synchronous with the contractions of the left ventricle, and there could be no pulse except in the arteries; but there are numerous cases on record that contravene these essential conditions. In a young man recovering from typhus fever, Dr. Parry found the contractions of the heart and the pulsations in the left arm, to be ninety; while, in the right arm, they were one hundred and eighty per

minute. The patient said he could at any time cause this difference in the pulse of his two arms, by violent exercise. In other cases the pulsations in the arteries are only half as numerous as the contractions in the left ventricle; and, in some cases, the pulse is altogether wanting in one or more arteries, in which there is no obstruction and the blood continues circulating as usual.

Drs. Jadelot and others attribute the pulse solely to the resistance made by the blood to the fingers, or to whatever diminishes the diameter of the artery along which the blood is moving with increased celerity when the left ventricle contracts. But this supposition is also refuted by facts. Some persons—and the writer among the rest—sometimes, and some of them always, experience a violent, uncomfortable pulsation in the toes of one or both feet, when brought naked near, without touching, some good conductor of electricity. Even the varnished and polished board of the bedstead produces this sensation to such a degree as to waken a friend from sleep.

Besides the facts already stated, there are many others that invalidate all the theories hitherto advanced to account for pulsation. That the pulse does not depend on the action of the heart, is proved by the fact that, when two ligatures are put round an artery at some distance from each other, and a puncture is made between the ligatures, the blood still flows with a jet, as it does in arteries generally. Dr. Dunglison states a case of pericarditis, in which "the pulse exhibited a decided intermission every few beats—yet the heart beat its due number of times, the intermission of the pulse at the wrist consisting in the omission of one of the beats of the heart." Dr. Storer details a case of paralysis, in which there was an entire absence of pulsation in both limbs on the left side, during five days before death occurred; and yet there is good reason to believe that the circulation continued uninterrupted during the whole of this time, for the limbs continued recovering from the paralysis till the day of death. Prof. Jackson states the case of the mother of a physician, of

Philadelphia, whose pulse disappeared in every part of her body, during an attack of acute rheumatism, and could never be again observed during her life—yet she was active, both in body and mind, and possessed unusual health; but died at last of inflammation of the intestines—no pulse existing. Analogous cases of the cessation of the beating of the heart are recorded in the Gazette, Nov. 21, 1836; and by Parry on the pulse.

It is very manifest that, if the sensation of the pulsation of the arteries were produced by the action of the heart, or of the blood-vessels themselves, or by the motion of the blood, or by all of them combined, such cases as those just stated could not take place while the blood continued circulating; and there can be no question that, in the case recorded by Prof. Jackson, the blood did continue to circulate vigorously during life; for, without this being the case, neither health could be enjoyed nor inflammation take place. When the above facts are all allowed their proper weight, the conclusion becomes irresistable, that the physico-mechanical causes assigned by physiologists are not the primary causes of the pulse, since all pulsation may cease while they are all in full operation in the living system; and to regard these as exceptional cases, and try to explain them away by a multiplicity of suppositions to suit each case, as physiologists are in the habit of doing, is mere prevarication—is explaining the *ignotus per ignotum.*

The pulse, then, in every possible case, is caused by discharges of electricity from the heart and arteries on the sympathetic nerves to their ganglia—being previously pressed out of the blood, which it entered through the walls of the pulmonary air-tubes, by the contractions of the left ventricle of the heart;—and from these ganglia it is gradually discharged, along the same nerves, to all the organs of the body, both voluntary and involuntary, in proportion as they become negative to the ganglia, during the performance of their functions. Hence the reason why the sympathetic nerves are connected with all the others and with the spinal marrow,

and thus distributed to every part of the body. This also accounts for the general periodicity of the pulse, and for all the anomalies in the phenomena of pulsation on record, even for the cessation of pulsation in the heart itself; for it is not supposable for a moment that the heart ceases entirely to contract when its sensible beats become imperceptible. It is, indeed, doubtful whether the alternate contractions and dilatations are the cause of the sensation of the pulse, even in the heart itself. The only abnormal change necessary to the cessation of the pulse is such a one as will produce a constant, instead of an interrupted or periodical, discharge of electricity along the sympathetic nerves; and that this is the alteration existing in such anomalous abnormal cases, appears from the fact that autopsy does not reveal any perceptible lesion anywhere in these cases,—the alteration in the nervous matter itself, where only it must exist, being too minute for perception, and is the last looked to for an explanation.

If any additional evidence were needed to prove that discharges of electricity are the primary cause of pulsations, that evidence is abundantly supplied by the fact that, in certain conditions of the system, strong pulsations are felt, and sometimes, even, are perceptible to the naked eye, not only where ordinarily no pulse exists, but where no arteries are near sufficiently large to pulsate. Almost every person is at times sensible of strong pulsations in the ends of his fingers; and mental emotions, which can operate upon the circulation only through the medium of the nervous system, not only occasionally excite very strong pulsations in every part of the body, but sometimes depress the pulse to such a degree as to cause fainting. Every physician must have observed, in his anemic patients, the pulse becoming almost imperceptible when they fell into a doze or quiet sleep; but, anon, when they were startled from it by a trifling noise, it bounded at once with such a force as would almost seem to burst the arteries. So ignorant are some practitioners of the nature of the pulse, that the writer has known them to bleed such patients day after day, and thus kill them outright.

There are on record many cases of abnormal pulsation in the region of the stomach and of other organs,—in some so violent as to be distinctly seen externally, at a distance of twelve or fifteen feet. In some cases, this pulsation in epigastis is caused by pregnancy, lasting only during the first three or four months; while, in other cases, pregnancy suspends or even cures this disease. But, in the majority of cases, there is no obvious or discoverable cause; and on dissection, after death mostly caused by other diseases, no perceptible morbid change is found anywhere. Sometimes these abnormal pulsations are synchronous with those of the arteries or beats of the heart, at others not; and they often amount to a mere fluttering of the præcordia. Pulsations in epigastrio are, therefore, attributed, by the most eminent physiologists, to nervous irritation; while, in the same connection, they attribute pulsation in the heart and arteries to the action of these organs themselves—as if, indeed, under the same circumstances, the same effect could be produced by entirely different causes, in the same person, and simultaneously. It sometimes seems as if physiologists did not consider themselves obligated to regard the laws of philosophical reasoning in the least. The same cause often produces different effects under varying circumstances; but, under similar circumstances, never. Nor can the same effect be produced by different primary causes, under any circumstances whatever.

Dr. Morgagni has recorded a case of the most violent pulsations in epigastrio he ever saw, accompanied by "large and vibrating" pulsations, in every principal artery in the body; but, after death, no vestige of disease could be found anywhere, by the most careful dissection. As the absence of pulsation may be produced by a continued discharge of electricity—so the pulsations may be produced where they do not normally exist, by the constant discharge of electricity, on the functional nerves, being changed into the interrupted or periodical;—or the discharge on the nerves accompanying the arteries of the organ, in which the pulsations are felt and sometimes seen, may be intensified.

Dr. Knox made "many hundred experiments" on the pulse, and found that the statement of Dr. Cullen, that there are two diurnal accelerations—one about noon, and the other in the afternoon,—independent of excitement by food, etc., which has been copied by subsequent writers, applies only to febrile abnormal states of the system. Notwithstanding the use of a moderate quantity of ardent spirits, taken at noon and in the evening, Dr. Knox found the pulse always higher in the morning, after a light breakfast consisting of coffee, bread and eggs, than in the evening, after supper consisting of similar articles and spirits, instead of coffee,—the beats averaging about eight more per minute in the morning than evening. He found the pulse not only quicker, but also more excitable, by the same quantity of food, or drink, or exercise, in the morning, than at any other time of the day or night. Dr. Thomson verified these experiments; and they agree that animal food is much more stimulating to the pulse than vegetable, and ardent spirits still more so. It is only by persons subsisting on the same, or similar, diet that such experiments can be made; and Dr. Knox seems to have been uncommonly regular in this respect. His dinner always consisted principally of animrl food, with a small quantity of vegetables and spirits or porter; and, notwithstanding the difference between his breakfast and dinner, the pulse, after the latter, averaged only two beats higher than after the former. To determine the difference between the effects of his food at breakfast and at dinner, he changed his fare at the latter to that at the former, and found that then his pulse was from eight to thirteen beats less after dinner than after breakfast. In diseases attended with fever, and particularly in hectic fever, he found the case reversed,—the pulse being more frequent in the evening than in the morning; and, when it became the reverse of this, he prognosticated recovery from the disease, and was rarely disappointed.

Now, if it be true, as before stated, that electricity is accumulated in the nervous centres during sleep, when the expenditure is at its minimum,—the cause of this diminution

of the pulse as the day advances, is explained by the supposition that, during active waking hours, more is necessarily expended than received into the system by respiration, notwithstanding the increase of breathing during active exercise and labor; and hence the reason of the necessity of sleep, and generally, of rest after great exertion and fatigue, is obvious, —fatigue being nothing else than the exhaustion of electricity previously stored up in the nervous centres.

Bibliographical Record.

On Diseases of the Skin. By ERASMUS WILSON, F. R. S. Fourth American, from the fourth and enlarged London Edition. Philadelphia: Blanchard & Lea.

The diseases of the skin—constituting a class of maladies immensely diversified, and yet, in numerous examples, so nearly running into each other as to render it difficult for the most learned dermatologists to determine the precise location they ought to have assigned them in dermal nosology,—will be conceded by all to be among the most perplexing ailments that science contemplates, or with which the prescriber has to contend.

The past history of medicine indicates how extensively they have occupied the thoughts of physicians; and the numerous works extant, exclusively devoted to their consideration, clearly show how much consequence has been attached to them. Dr. Wilson's treatise has been in the hands of the profession quite a number of years, undergoing improvements and receiving additions, from time to time, until, in this fourth edition, it has acquired a copiousness, and a richness in detail and in practical illustration, which entitle it to be considered as one of the most, if not *the* most, desirable works on the group of diseases of which it treats.

One thing cannot fail, we think, to excite the wonder of the industrious and thoughtful cultivator of our science. It is, that, although the various departments of the healing art are prosecuted, on this side of the Atlantic, with an eagerness which characterizes our young and vigorous institutions, nevertheless the branch to which the vol-

ume before us is devoted, can scarcely be said to have engaged the attention of the writers of our country. This is the more singular, since our *savans* have never evinced the least hesitancy in grappling with the great and more complex matters of pathology and therapeutics, as exemplified in surgery, midwifery and general practice. On the contrary, we may point with pride to the many ennobling achievements, both of our predecessors and cotemporaries, in these several fields of profsssional culture.

As far as recollection serves us, we may observe that—save a small work by Dr. Worcester, of Ohio, and republications, by Dr. Bulkley (of New York), of a foreign work on cutaneous diseases, with occasional articles in the journals, appropriated to a single form of skin disease, or to a variety, as to ichthyosis and to the variolus forms,—American authors and the American press have been silent on the subject. It may be hoped, however, that ere long *Dermology* may awaken in the minds of medical men, in our great centres of professional investigation, that attention which it truly deserves; and that, therefore, the *hiatus* now manifestly existing may be honorably filled.

Certainly, when the diversity of our climate, the unprecedently rapid increase of our population, both native and foreign, and our unbounded intercourse with all the countries and peoples of the world, are considered, it will be perceived there can be no deficiency of material.

In the first chapter, the reader will find himself greeted with an exceedingly well-written and able *resume'* of the anatomy and physiology of the skin.

In the section appropriated to the physiology of the dermal tissue, the author remarks (page 64): "By means of its absorbing power, the skin is enabled to act as a respiratory organ. The importance of this function, in man, is not sufficiently estimated; but, in the lower animals, it is universally acknowledged. The process of absorption, in the skin, is effected by an active endosmosis, which is more and more controlled by vital influence, as it reaches the strata of the epidermis most nearly in contact with the derma. This function of the skin is calculated to enact an important part in the health of the individual, in relation to the purity or impurity of the atmosphere in which he moves."

He again remarks: "When the body is immersed in water, of a

temperature say of 82° of Fahrenheit, and a few degrees below, and allowed to remain in it some time, it increases in weight by absorption of the fluid." After enumerating the experiments of certain distinguished physiologists, in proof of the above important truth, and their results, he states the converse in the following terms:—"Opposite results to these—namely, loss of weight by transpiration—take place whenever the temperature of the bath nearly approaches or exceeds that of the body." He still further observes: "These experiments have another imporant bearing on the physiology of the skin, since they prove that the temperature of a bath which conduces to absorption has the effect of a sedative on the system, and dimfnishes the rapidity of the pulse; while the converse, acting as an excitant of exhalations, increases the frequency of the heart's pulsations. Thus, it will be perceived how essential, to the intelligent practice of medicine, is a thorough knowledge of physiology, and to what important deductions, both pathological and therapeutical, it gives rise.

The classification of cutaneous diseases, on a basis at once rational and natural—viz: the character of their respective causes,—has been an object of first consequence with the author; and it is believed *his* will accord more nearly with established physiological principles, than any that has preceded it.

Passing over the main body of the work without comment, which the space allotted to us will not allow, we come to the last chapter, which is appropriated to certain selected formulæ—which, as we are told by the author, in the preface, he has "found of value in the treatment of diseases of the skin." To these, it will be observed, "frequent reference is made in the pages of the work." From a hasty examination of their constituents, we are inclined to regard them as peculiarly applicable to the more chronic forms of eruptive diseases. Those which are designed for internal use, having arsenic entering into their composition—either as base or as one of the principal ingredients,—cannot fail to be singularly efficacious, when judiciously prescribed.

In our judgment, the publishers have erred greatly, in not binding the plates, so frequently referred to by the author, with the text We do not undertake to say that such an arrangement would be as remunerative to themselves; but we offer it, as our unqualified opinion, that it would be vastly more advantageous to the profession,

for whose *benefit*, especially, the work was doubtless composed. Thus considered, we will not question but that arrangement, which would render the book most acceptable, and therefore most anxiously sought for by the practitioners of the country, would be most profitable to the publishers.

It were but to reiterate a truism, admitted by all, to say that mere verbal description affords exceedingly inadequate impressions of objects, natural or artificial, which have not been presented to, and recognized, by one or more of the senses. Nor is it less a truism, that, so far as the diagnosis—and, to some extent, the treatment of the great mass of cutaneous diseases—is concerned, most of the works devoted to their consideration, and not illustrated by plates, are next to useless to such practitioners as have not had it in their power to avail themselves of clinical advantages. We submit, then, to the publishers of such works, in future, the propriety of interspersing, in their appropriate places, such plates and drawings as the authors may have deemed essential to the clear understanding of the text; or, if they must adhere to the plan of publishing them separately, of sending them forward to the retail dealers in association with the works they are designed to illustrate. We venture to suggest, too, that the proprietors, respectively, of the *Periodical Medical Press* would in no sense be annoyed by the receipt of a copy of the plates, in company with the book they are expected to notice or review. Notwithstanding this, to us, obvious error, the reader will find much in the treatise to commend—much that will confirm impressions already existing in his mind, and possibly correct others, which may have been quite too hastily adopted.

The style, throughout, is bold, vigorous and manly, and the mechanical execution satisfactory. It gives us great pleasure to recommend it to the favorable consideration of the profession.

For sale by Raymond & Selleck, in this city. K.

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1. *Transactions of the Twelfth Annual Meeting of the Ohio State Medical Society, held in the City of Sandusky, June* 1857.
2. *Transactions of the New Hampshire Medical Society (Sixty-seventh Anniversary) held at Concord, June 2d and 3d,* 1857.

The first of the above named publications, is a volume of 226 pages, containing the records of the Society, the address of the President, and the reports of the several Committees. The Society

was in session four days, and transacted a very considerable amount of business.

Dr. Hays, surgeon to the late Dr. Kane's Arctic Expedition, was present, and elected to an honorary membership. In response to an invitation, Dr. H. made a few remarks, medically, relevant to the Arctic regions.

He said that the influences of climate upon the animal economy were marked, and th diseases peculiar. He had never seen a case of tubercular disease among the natives, and this is doubtless due to the great consumption of fatty food. If he had a consumptive patient, he would send him to Greenland, if possible, and put him upon train oil diet, with a dog sledge and a bear huut for exercise. He had heard of but one case of hemorrhage from the lungs, through his friend D. Kane, Jr.

The crew of the Advance suffered much from scurvy, but the Esquimaux are rarely afflcted with it. The prevalence of this disease he attributed to the combined influences of salt food, darkness and cold. The darkness seemed to have a bleaching effect, and tended to diminish the coloring matter of the blood. The brick-dusty appearance of the blood, mentioned by Dr. Kane in his narrative, expressed it very clearly. In the treatment of this fearful disease, he derived much benefit from the use of raw potato, which he dressed for his patients as a salad ; but its effect was lost as the severe cold weather of mid-winter set in, overpowering the vital forces. Strong, carbonaceous food was then requisite, and potato was good only as an adjunct. His specific was then walrus meat, or, still better, the liver of the same animal. But the term *specific* he would only use here as applicable to the meat in its raw state. It seemed then to have a power which was lost in the operation of cooking. Like cooked fruits and vegetables, it lost its freshness. He gave it at first to his patients dressed like the potato as a salad. They afterwprd became partial to it, and, overcoming their repugnance to raw flesh, and hard frozen, they really often preferred it thus.

It is in this condition the natives mostly take their food, and from them the Doctor received the idea to which, he believed, the ship's company owed its salvation. They had no vegetable food, and a strictly animal diet, in that region, seemed to furnish all the requisites of perfect health.

He would relate a case falling under his notice. An Esquimaux

had his leg frozed above his knee, stiff, colorless, and to all appearance, lifeless. He was placed in a snow house at a temperature of 20 deg. below zero. The parts were bathed with ice cold water for about two hours, then enveloped in furs for three or four hours. Then frictions were used, first with the feathery side of a bird skin, then with snow, alternately wrapping the limb in furs and rubbing it, for nearly twenty-four hours. It was then carefully wrapped up, and the temperature of the snow house elevated, by lamps, above zero. On the third day the patient was taken to his house, (where they have often a temperature of 70 or 80 deg.) and in seventy hours he was walking about with only a slight frost bite on one of his toes.

This treatment the Doctor thought highly philosophical, and he profited greatly by it in his own practice with frost-bitten limbs. The point being to keep away all external heat, and allow the vital powers of the system to do their work. By exposing a frozen part to a warm temperature, the skin becomes thawed out, and dies, before the circulation can work itself through the underlying frozen tissue.

The address of the retiring President, Peter Allen, M. D., contains an intesesting account of the profession in the early days of Ohio, and the peculiar nature of the labors of the pioneer physicians of the now great and prosperous State which reposes between Lake Erie and the Ohio river.

Somewhat kindred in spirit, to the address, is the report on obstetrics, by J. G. F. Holson, M. D. It contains a chapter devoted to the early history of midwifery, which carries the reader through the successive stages of advancing art, from the rude accouchment of the dusky savage, to the appliances and luxuries which surround her pale sister of the present day.

The balance of the reports are creditable productions, and indicate zeal and industry on the part of the several committees.

The transactions of the New Hampshire Society are interesting, from the fact that the last meeting was on the *sixty-seventh* anniversary of its organization, an age truly venerable in Medical Societies of this country. They constitute a pamphlet of one hundred and four pages, containing the usual addresses and reports. It is gratifying to see such evidences of professional industry and ability, as are exhibited in these transactions. G.

Manual of Physiology. By WILLIAM SINHOUSE KIRKES, M. D., Fellow of the Royal College of Physicians; Assistant Physician to, and Lecturer on Botany and Vegetable Physiology at, St. Bartholomew's Hospital. A new and revised American, from the last London edition. Philadelphia: Blanchard & Lea, 1857.

The favorable reputation of this book renders anything more than a mere notice of a new edition, unnecessary. It is, what it claims to be, a *manual* of Physiology, exceedingly convenient for the student's use. We cannot but commend the modesty which characterizes the appearance of the American reprint. The author's name is not overshadowed by that of the American editor.

For sale by RAYMOND & SELLECK.

Spirit of the Medical Press.

Clinical Instruction in Medicine.—Free access to hospitals, both general and special, is of inestimable advantage to medical students, and particularly to those of an advanced grade. They ought to become familiar with the *physiognomy* of disease, so that, when thrown upon their own resources, and obliged to diagnosticate for themselves, without preparation, they may not be wholly like wanderers in a strange land, nor feel like a person at the junction of several roads, not knowing which to take.

But if it be true that a great deal may be gleaned by the careful student, even while only "walking" the wards of hospitals, the latter *may* be of infinite value to him. The truth of this assertion is plain to all who have enjoyed the benefits of attendance upon some of the *cliniques* of the European medical institutions. And it is not only to follow the visiting physicians and surgeons, to hear what they say, see what they do, and note the effects upon the patients, which can be said to constitute the clinical study of disease. The opportunities afforded to students in certain foreign establishments, of exercising their powers of diagnosis upon patients, and rendering their account to the critical questioner in charge, are the genuine tests of knowledge, and the surest means of acquiring sound medical information. With these privileges, the young physician returns to his home with a feeling of strength and confidence, such as those cannot have who are launched into practice fresh from a three years' course of mere lectures and office study. The latter are at once quite "at sea," and make such blunders as the "*vis medicatrix naturæ*" will have hard work to remedy. We trust, however, that even a neophyte would not so egregiously stumble, as did, to our knowledge, a popular homœo-

pathist, who gravely pronounced a patient to be laboring under *mild typhoid fever*, when he had serious congestion of one lung, and not a whit of any intestinal disorder.

We were led to the consideration of the advantages of true clinical instruction in medicine and surgery, by listening to the admirable lecture, introductory to the course for this year, under the auspices of the Medical Faculty of Harvard College, and which was delivered on Wednesday, the 4th inst, at the Medical College in Grove Street.

Professor Shattuck was eminently successful in entertaining and instructing his audience, in which we noticed clergymen and other gentlemen not "to the manor born," who heard many wholesome truths worth remembering. We trust that the production may be given to the public, for, unlike many introductory and valedictory addresses, it seemed to us very worthy of a typographical dress. There are many sayings in it so necessary to be known, by the laity as well as the profession and students of medicine, that we should esteem its wide circulation a real benefit.

The lecturer gave a "bird's-eye view" of the clinical advantages to be obtained in France and Italy particularly, with allusions to the schools of England. The system adopted at Florence is an admirable one; and the action of the government most creditable. By its liberality and strict *surveillance*, a body of wholly reliable practitioners is constantly secured to the community; and thus, more than in any other way, is quackery discouraged, and, in fact, repressed.

Dr. Shattuck did not, if we rightly remember, refer to the German schools. We have been much interested, of late, by the perusal of letters from some of our younger medical men, who have spent most of the time allotted by them to study abroad, in the German institutions. Conversations with some of them, since their return, confirm us in the very favorable opinion we had formed of the advantages to be secured by the faithful student under such incentives and with such facilities.

The question will occur, in conclusion, why cannot *more* be made of our own hospital advantages? If we cannot boast the colossal establishments of the older countries, we certainly have enough material, and plenty of opportunity might be afforded, for a most efficient and valuable course of clinical teaching. And why cannot the system of foreign instruction, which has also of late obtained in some of our sister cities, be set on foot here. Nothing would attract students more quickly, nothing could fit them more thoroughly for the duties of their responsible profession. It seems to us a duty which the profession owe to those about to enter it, to do this. We say the profession—we mean especially those who are teachers and hospital medical officers—but we think that the profession, *as a body*, should call for this plan to be thoroughly put into execution Practitioners and patients would alike reap the benefits which result from

such a course of instruction; the former in having well-educated brethren, and securing, at first, a great diminution of quacks, and finally, it may be hoped, their extermination; the latter, in being sure of always having sound practitioners, versed in the *practical* as well as the theoretical knowledge of their art.

The subject should command the earnest attention of the profession everywhere; and we trust the time is not far distant when we shall boast a well-organized, fully-attended, and widely-reaching system of clinical instruction in medicine and surgery.—*Boston Med. and Surg. Journal.*

Reproduction of Bones and Joints, after their Removal in cases of Whitlow. By H. H. Toland, M. D., of San Francisco, California.—*Paronychia or Whitlow: its Consequences and Treatment.*—Although this is an exceedingly painful disease, and frequently destroys the parts affected, it has received but little attention from the profession, because it rarely endangers life. There are four varieties of Whitlow:

1st. That seated between the epidermis and cutis vera.

2d. That situated in the sub-cutaneous cellular tissue.

3d. That occupying the sheaths of the tendons.

4th. That seated between the periosteum and bone.

Every phlegmonous inflammation of the fingers and toes belongs to one of the forms of paronychia above specified. Every variety of this disease is excessively painful. The first three are speedily removed by a free incision; but the fourth is a much more serious affection. Even when treated early and properly, it frequently causes a destruction of the bone, in consequence of a separation of its periosteum; pus forms between that membrane and the bone; the former is detached, and the latter loses its vitality, and if not removed will be destroyed.

As the bone is formed by the periosteum, if the latter be not removed, and the soft parts are kept extended, the bones as well as the joints are reproduced, and the part restored to its former usefulness. It has long been known that bone will be re-produced, provided the periosteum remains, and we only claim to have made the discovery that the joints are also, by proper management, restored, even under the most unfavorable circumstances. Whether they are as perfect as the original, possessing cartilages, ligaments, and synovial fluid, we are unable to say; but we know that they possess motion, and sufficient strength to perform the function of the most perfect joints.

James Clarke, a porter, now of Columbia, Tuolumne county, consulted us respecting the propriety of having the middle finger of the right hand amputated. He had been treated by a good surgeon, who thought its removal necessary.

As only the third, and half of the second phalanx were diseased, and believing they would be re-produced, we advised their removal, so that even if there was no motion in the first joint, the finger would still be useful. An incision was made from the first joint, extending laterally, under the nail, to the same point on the opposite side. The soft parts were detached from the denuded bone, and the second phalanx divided with bone forceps about a quarter of an inch from the second joint. The wound was closed by the interrupted suture, and the soft parts retained in a proper position, by the application of splints and a bandage.

In four weeks, to my astonishment, *the bones were not only restored*, but also *a perfect joint was formed*. The finger is now as strong, and the motion of the newly-formed joint as perfect as the original. Being a porter, he injudiciously used the finger before the bones were perfectly solidified, and a slight lateral curvature was produced; but in every other respect the finger is as perfect and useful as before the occurrence of the accident.

McGowen, now employed at Newland's stables, on Kearney-street, was advised, in January, 1857, by his physician, to have the forefinger of the right hand amputated at the second joint, and he came to our office for the purpose of complying with his instructions. Instead of amputating the finger, the phalanges were removed, and the wound dressed as in the former case. In a few days, although requested to visit the office until cured, he renewed his occupation, and we lost sight of him entirely. On the 10th of June his finger was examined, and we found the second joint perfect and the entire phalanx restored. The last phalanx, in consequence of the soft parts being allowed to contract, is short, although a joint exists, and the finger is as strong and useful as before the operation.

Shannon, a cooper, living at No. 6 Jackson street, had a whitlow of the first forefinger, involving only the last phalanx, which was removed at the joint by a lateral incision. He resumed his business in a few days after the operation, and the finger was not examined for several months. The newly-formed bone is shorter than the original one, although the motion of the joint is perfect, and the finger in every respect as servicable as before.

Other cases might be given, if these were not considered sufficient, to establish the point in question.

Cullens, who lives on Stevenson-street, between First and Second streets, had suffered for three months before he became my patient, from a whitlow, involving the whole of the right thumb. Free incisions had been made, without affording relief. The thumb was enormously enlarged, the first and second phalanges were denuded, and the flexor tendon near the extremity destroyed. Notwithstanding its excessively diseased condition, we determined to remove the bones, believing they would be re-

produced, although we were confident that the thumb would not be as perfect as if he had received proper attention at an earlier period.

An incision was made upon the upper side of the thumb near the location of the extensor tendon, and carried upwards under the nail, and both phalanges removed. This operation was performed about the first of April, and in six weeks the soft parts were healthy, and the bones and joints re-produced. Although he has but little control over the last phalanx, in consequence of the destruction of the tendon, the thumb is nearly as long as its fellow of the opposite hand. It presents a natural appearance, and is improving daily, both in strength and motion.

A gentleman, living near Redwood city, had suffered for several weeks from a similar disease, and was operated upon on the 15th of April, 1857. In his case a lateral incision was made, and both phalanges of the right thumb were excised. This case was progressing much more favorably than that of Cullens, when he left the city, two weeks after the operation. He has not been heard from since, although no doubt is entertained of the entire restoration of both bones and articulations.

In 1853 a carpenter was admitted into the State Marine Hospital with a compound commuted fracture of the great toe. After remaining two months, and finding that union had not taken place, and that the bones were diseased, instead of amputating the toe, we removed the bones, and in a short time they were restored, although we were not aware of the reproduction of the articulations.

Blaisdell, who then lived near Oakland, had the great toe of the left foot injured by a large piece of timber. When examined, we found the second phalanx diseased, although the foot was healthy. In December, 1856, an incision was made upon the internal side, and extended from the articulation with the metatarsal bone to the extremity under the nail. Both phalanges were removed, and the wound closed by the interrupted suture. In four weeks from the time the operation was performed, the bones were re-produced, and the patient could wear a boot without inconvenience. The articulations appear to be perfect, although the last phalanx was not diseased and was removed with the periosteum. This can only be accounted for by supposing that the periosteum detached from the second phalanx produced a sufficient quantity of osseous matter for the restoration of both. Mr. Blaisdell is now employed on Bird Island, and suffers no inconvenience from the injury.

In removing diseased bones from either the fingers or toes, lateral incisions should be made to avoid the tendons; and the soft parts, until bony matter is deposited, should be supported by pasteboard splints, applied so loosely as not to produce pain. If they be found inconvenient, the other fingers or toes may serve as splints. Before the bones are fully developed, the member should be flexed occasionally, although that precaution was

not taken in some of the most satisfactory cases given above. In Cullens' case, in consequence of the destruction of the tendon, an effort was made to produce anchylosis of the first joint, by the application of splints, but without success.

Many operations of a similar character have been performed in the United States Marine Hospital, but not being able to furnish the results, they have been omitted. Most of the cases cited can be examined by the incredulous, and the above statements verified. The result of these experiments is not only interesting but extremely useful. Useful, because by the loss of a thumb a laboring man may be deprived of the means of pursuing the only occupation with which he is acquainted, and by which alone he can support himself and family. By the loss of a great toe, the strength of the foot is impaired, the gait rendered unsteady, and locomotion fatiguing. Interesting, because it establishes the efficiency of the restorative powers of the human system more fully and unquestionably than anything that has heretofore been observed; and when assisted and directed by those who, from greater skill and experience, are more competent than ourselves to act efficiently, results more brilliant than we can now imagine may be realized.

Supra-Renal Capsules.—M. Brown Sequard has recently addressed the Academy of Sciences, of Paris, from Philadelphia, a note in response to a communication of M. Philipeaux on the above organs.

M. Brown Sequard has undertaken a new series of experiments to demonstrate that death is the immediate effect of ablation of the supra-renal capsules.

The following are the results of fifteen coneys submitted to extensive violence to the peritoneum and divers other organs. Three survived from two to eight days, seven from twenty-four to forty-eight hours, three died at the end of seventeen, nineteen and twenty hours, while one lived eighteen days, and another as long as three weeks. Of ten coneys from which the kidneys had been extirpated, five survived from twenty-four to sixty hours, and one sixteen hours only. Of ten ten coneys despoiled of the supra-renal capsules, not one lived so long as those of the preceding experiments which died soonest. Six died between the seventh and tenth hours, and the other four between the tenth and fourteenth hours from the operations.

The mean duration of life in the above experiments may be stated thus:

1st. In the coneys with the wounded peritoneum, liver, kidneys, etc., about three days, or more exactly, seventy-two hours.

2d. Those from which the kidneys alone had been extracted, about one day and a half, or thirty-five hours.

3d. Those despoiled of the capsules but nine and a half hours.

The difference, then, is very great, and with a knowledge of these facts

is it possible not to admit that the extraction of the supra-renal capsules was not the special cause of death in these last experiments. It is proper to observe that those despoiled of the capsules died too soon to have been killed by peritonitis. Moreover the ablation of the capsules was followed by symptoms which were not manifested in the animals submitted to the injuries of the peritoneum, liver kidneys, etc. These phenomena show that the supra-renal capsules have a great influence on the blood, and the nerves of these little organs exercise a singular influence on certain points of the nervous centres. * * * * * The influence of the nerves of the capsules is clearly demonstrated in some cases after the extirpation or puncture of one of these organs. In such cases sometimes the animal is seized with vertigo, and some minutes before death roll, or rather revolve around the longitudinal axis of their body as they do when the middle peduncle of the cerebellum is punctured.

I conclude from facts observed concerning the supra-renal capsules, 1st, That if these organs are not essential to life, they are at least of very great importance; 2d, That their function are at least of equal importance to that of the kidneys, because when it fails, death supervenes more quickly than after ablation of the kidneys.

If these conclusions are correct, the fact as stated by M. Philipeaux, that life may continue after the extirpation of the two supra-renal capsules, depends probably for existence upon the consideration that there are other organs that can supplementarily discharge their function. There may be organs, then—as in the case of some of the glandular organs—whose action is capable of compensating to the system for the loss of the supra-renal capsules.

The congested condition of the thymus and thyroid bodies observed in animals dying after the extirpation of the capsules renders the supposition highly probable they may supplementarily discharge the functions of the supra-renal capsules in the absence of those little organs.—*Gaz. Des. Hos., and Nashville Journal of Medicine.*

Medical Responsibility.—Judge Minot, of Pennsylvania, lays down the following rules as applicable to medical practitioners: 1. The medical man engages that he possesses a reasonable degree of skill, such as is ordinarily possessed by the profession generally. 2. He engages to exercise that skill with reasonable care and diligence. 3. He engages to exercise his best judgment, but is not responsible for a mistake of judgment. Beyond this the defendant is not responsible. The patient must himself be responsible for all else: if he desire the highest degree of skill and care, he must secure it himself. 4. It is a rule of law that a medical practitioner never insures the result. Judge Sargent, in a recent case occurring in Strafford County, N. H., thus charges the jury: "The law requires of a man who offers his services in any profession, three things: That reasona-

ble degree of learning, skill, and experience, ordinarily possessed by others of his profession; reasonable care in the treatment of the case committed to him; and the exercise of his best judgment in cases of doubt. Judge Story defines ordinary diligence and care to be that degree of care which men generally employ in their own concerns. All engage for the exercise of ordinary care in a profession. A physician does not engage to warrant and effect a perfect cure. The rule is, that where both parties are benefitted by a contract, they should use such skill and diligence as men of common prudence employ; not such as belong to very prudent or skillful persons. Few cases of surgery are alike, and judgment is required in the treatment of them. The law does not require freedom from errors of judgment. The employer has to exercise judgment, too, in the selection of the professional man; and, in cases of reasonable doubt, none are held responsible for errors of judgment, nor for mistakes committed with ordinary care and skill. Now, diseases are rendered different by influences of character and habit, and by constitutional and natural causes. When the jury are satisfied of reasonable skill and care, that is sufficient. To show the want of skill and negligence, it is never enough to show that the physician has not treated in that mode or used those measures, which in the opinion of other medical men the case required. This alone is not evidence of want of skill and care. The plaintiff must go farther, and show that the defendant had not the requiste qualifications, or did not use them.—*American Druggists' Circular and Chemical Gaz.*

Bromide of Potassium in Epilepsy.—By Sir Charles Locock.—Some years ago he chanced to see a paragraph in the *British and Foreign Medical Review*, giving an account of some experiments that a German had been making with bromide of potassium. He found that by taking ten grain doses three times a day about a fortnight he became impotent, but upon leaving off the medicine his powers returned; he tried a similar experiment with others, and a similar result was produced. He accordingly thought he would try bromine of potassium in many hysterical cases that he met with unconnected with epilepsy, in which there was a great deal of sexual excitement and disturbance, attended with various distressing symptoms difficult to manage; and he found that from five to ten grains given three times a day had the effect of calming the excitement to a very great degree. About fourteen months ago he was applied to by the parents of a lady who had had hysterical epilepsy for nine years, and had tried all the remedies that could be thought of by various medical men (himself among the number) without effect. She began to take the bromide of potassium last March twelve month, having just passed one of her menstrual periods, in which she had two attacks. She took ten grains

three times a day for three months; then the same doses for a fortnight previous to each menstrual period; and for the last three or four months she had taken them for only a week before menstruation. The result had been that she had not had another attack during the whole of the period. He had tried the remedy in fourteen or fifteen cases, and it had only failed in one, and in that one the patient had fits not only at the times of menstruation, but also in the intervals.—*Med. Times and Gazette.*

Surgery.—*Excision of the Head of the Femur in the Hip-Joint Disease.*—Dr. Kinloch, (Charleston *Med. Jour.*) reports a case of the excision of the head of the femur in morbus coxarius, which terminated fatally. The patient was 20 years of age, and had suffered from symptoms of hip-joint disease about two years. On exposing the joint, the disease was found to be very extensive, with a perforation of the acetabulum. A portion of the rim was removed with the head of the femur. The patient did not rally well, and sunk in about thirty hours.

Mr. Erichsen, in a recent clinical lecture, (*London Lancet*) discussed minutely, the pathology of hip-joint disease, and pointed out the class of cases in which excision is justifiable. He divided coxalgia into three varieties, *athritic, femoral, and acetabular.* The first is characterized by the symptoms of acute articular inflammation. The joint becomes hot and swollen, is exquisitely sensitive, the pain being more severe than in other forms of arthritis. This variety occurs in young adults, and usually terminates in anchylosis without suppuration. Excision in these cases is not necessary. The *acetabular* form differs widely from this. In it the primary seat of disease is in the pelvic bones, the joint being involved secondarily. It occurs in adults, always goes on to suppuration, never to anchylosis, and is generally fatal. It commences with abscess in the illica fossa, or at some point within the pelvis; there is at first little or no pain, with no change in the length of the limb—excision is here impracticable. The third, or *femoral* form, is where the head of the bone is primarily affected by caries, often of a tuberculous character. It occurs in strumous children, is subacute for a time, and is attended with the early formation of abscess it is in these cases that excision may be undertaken. The details of a case of excision are given, in a patient, æt. 7 1-2 years, which promised good results.

Extirpation of the Supra-Renal Capsules, Spleen and Typhoid Gland, from living Animals—M. Philipeaux addressed a note to the Academy of Sciences, in which he says that he has succeeded, not only in removing the supra-renal capsules, but also the spleen and thyroid body in two white rats (Mus Rattus), aged one month. By an operation of the kind described in my first note, I have removed first the right supra-renal cap-

sule, and in ten minutes afterwards the left. These animals in about one month were completely recovered, when I proceeded to remove the spleen through a small opening in the side of the abdomen, after which the wound was closed by a single suture. It was but a short time until they had again completely recovered, and I was successful in removing from the same animals, the thyroid gland, through a longitudinal section in the anterior part of the neck, on a level with the tracheal artery. At this time these animals, aged three months, are in excellent health, notwithstanding they have been despoiled of their supra-renal capsules for sixty-seven, the spleen for twenty-six, and the thyroid body seven days. I take this opportunity of informing the Academy, also, that I possess one male rat, living in fine condition, which has been for four months deprived of his supra-renal capsules, and a female for forty-three days, without any modification of their functions that can be perceived. The female has been impregnated, borne eight young ones, and is raising them.—*Ibid.*

Resection of the Elbow-Joint, by a single Long Inciseon.—The London journals notice an important modification of the operation of resection of the elbow-joint, practiced recently by Paget, Fergusson, and Erichsen, viz: a single straight incision, instead of the H or I incision, so generally practiced. This improvement is attributed to Langenbeck, and these surgeons were led to adopt it upon the representations of one of the German Surgeon's pupils. It is contended in favor of this modification, that the lateral separation of the soft parts, thus afforded, gives ample space for the operation, while it leaves the bones much better covered, and the wound a much smaller one than would otherwisebe the case. The "single long incision," is not, however, a recent improvement, as it was originally suggested and practiced by Park, in 1781. It is the method of excision of the elbow-joint, practioed by Drs. Buck, Post, and Van Buren, of this city.

Spmpathetic Inflammation of the Eyeball.—Mr. Walton remarks (*British Med. Jour.*), that the horse doctor is in advance of the accomplished opthalmologist in their knowledge of some diseases of the eye. It has been a practice among farriers, in certain ophthalmic diseases of the horse, to destroy the eye by suppuration, knowing well that the other eye, which is in great peril, could be saved by this means. Mr. Wardrop, taking advantage of this hint many years since, practiced evacuating the humor of the affected eye, and thereby relieved the sound organ from the dangers of a sympathetic inflammation.

Treatment of Primary Syphilis by Preparations of Iron.—Ricord suggested the employment of potassio-lactate of iron in phagenic chancre, and

Mr. Acton recommends it very highly. Mr. Behrend (*Lancet*), believing in the essential identity of the virus of every form of chancre, and attributing the apparent differences to special circumstances was led to employ this preparation of iron in the treatment of the common chancre. He reports the details of a number of cases thus treated, with the most satisfactory results. His method of administering the iron, is to make a mixture of one ounce to six, of which two tea-spoonfuls are to be taken three times a day. The local applications are simple.

On the use of Iodide of Potassium in the Treatment of Leucorrhœa by Injections.—The wise man said, "There is nothing new under the sun," and the saying applied to the practice of Medicine in the present age, can admit of no refutation, and indeed of but little opposition.

Most of the remedies or curative agents lately brought into notice, more especially those which are published to the world as new discoveries, may be proved to have been used in very remote periods; and many too, have been well known among the teachers of medicine, in the very infancy of the art. The present age, perhaps, more than any other, has been characterized by the successful diligence and zeal which it has displayed in researches. The efforts made in the various arts and sciences, have been often rewarded by great and important discoveries, and none of the branches of knowledge can boast of more successful improvements than those which have been connected with medical inquiries. While concession to the truth of this opinion must be very generally acknowledged, it will also be allowed, the assiduity and ardor of pursuit after novelties, especially in the healing art, has been almost every where so exclusively directed to recent or modern innovations in practical as well as theoretical principles, that much very important though ancient medical skill, communicated by the writings of an early age, has been disregarded, or ignorantly confounded with pretended new discoveries; the new medical author or practitioner claiming the merit and honor, of first introducing as a beneficial novelty, some plan or method well known to his predecessors, and recorded in works yet extant, and of easy attainment. It is certain that many important articles of the materia medica, apparently of opposite tendency to one another, are judiciously used in morbid affections. To account satisfactorily for this fact, theory alone will not suffice, but experience will, in such instances, guide the physician's conduct, without regard to any theory; and the beneficial result of the use of seemingly opposite medicines, will often do away the extravagant respect so uniformly shown to theoretical reasoning in the practice of young physicians.

But my present object being to awaken the attention of my medical brethren to an article which I deem of greater importance and efficacy,

and possessed of more valuable properties than are now generally ascribed to it. This remedy is the iodide of potassium.

I will now give the history of three cases which came under my care: although they may be imperfect in many particulars, yet I hope they are of sufficient minuteness and correctness to occupy the sphere they are intended for, in the mind's eye of the reader.

In the spring of 1856, Jane, a negress of Mr. E. S. Miller, *æt.* 30 years, of a leucophlegmatic temperament, came under my treatment. Two years ago she was attacked with dysmenorrhœa, followed soon after by prolapsus uteri, with a leucorrhœal discharge. When she came under my care the leucorrhœal discharge was of more than an ordinary quantity usually met with in such cases. When the discharge came in contact with the external parts, it produced excoriation. Previous to the appearance of the catamenia, the uterus would sink low into the pelvis, frequently making its exit beyond the labia externia. The catamenia was of the usual character and quantity for the first two or three days; then it would change its form in regard to quantity, and assume that of menorrhagia, never yielding but to the action of remedies. Such is a general history of the above case when it came under my care.

My first object being to relieve the dysmenorrhœa and prolapsus of the uterus, which I accomplished after "so long a time," but with no diminution of the leucorrhœal discharge. I followed the usual course of treatment for its relief, but with no avail. Relying solely on an alterative course of treatment for its cure, my mind naturally led to the use of the iodide of potassium. I reasoned with myself thus: If the iodide of potassium is such an efficient alterative when taken by the mouth and addressed to the constitution generally, would its action not be more potent, if brought within direct contact with the diseased parts? Acting upon these premises, I commenced the use of the iodide potassium by injections per vaginam; and, much to my surprise (though of an agreeable character), the discharge made a speedy surrender. It has not not made its re-appearance, now nearly a year since.

1857. Mrs. S., *æt.* about 21 years, of a sanguine temperament; has suffered much since her last confinement (six months ago) with leucorrhœa, of an ordinary character. Ordered a solution of iodide potassium by injections three or four times a day. The discharge was soon relieved.

Mrs. C., *æt.*, about 28 years; leucophlegmatic temperament. Confined about seven weeks since with her fourth child. Suffered much after her accouchment with ovaritis. Leucorrhœal discharge somewhat profuse, and of a thin, white appearance. Ordered iodide potassium by injections. Discharge checked on the fourth or fifth day.

The quantity of iodide potassium used was as follows: dr. iss to a half pint of aqua puræ.—*New Orleans Med. and Surg. Journal.*

Editorial and Miscellany.

Medical Education—The Duties of the University of Michigan in Reference Thereto.—In previous numbers of the *Independent*, we have discussed the general subject of Medical Education, and its bearings upon the Medical Department of the State University. We propose, now, to allude to the *moral obligation* resting upon the University in reference to educational advance, in consideration of the advantages afforded by its endowment.

In previous articles, we have held, what is now the general sentiment of the profession, that certain improvements in the course of medical training were imperatively called for by the wants of the medical student. These improvements are briefly as follow:—Increased period of pupilage; prolonged lecture terms; a highe standard of acquirement; and hospital instruction to be made a *requirement* for graduation. Schools depending for their support upon ticket fees, naturally mark out such a course of requirements as will attract the largest number of students; and such schools will consequently be slow to adopt *all* of the above-enumerated improvements. Possessed, as all the best schools are, in a greater or less degree, of hospital advantages, they will give prominence to these privileges, and fail to incur the risk of diminished classes, consequent upon the more rigorous demands of increased time and acquirement. To this class of schools, useful and meritorious as they are, we shall, so long as they compete for *numbers*, look in vain for the pioneer in *thorough* reform. Where, then, is the school that will wreath for itself a crown of professional glory, by instituting *all* the requirements consistent with the enlightened and humanitary demands of the times? Wherever that school is, we would rather be connected with it, than with any other school in the United States, whatever may be its present prestige.

Virginia has two medical schools; one, the Medical Department of the University of Virginia, luxuriates in a country location at Charlottesville, where it has long operated as a mere *feeder* to the Philadelphia schools; the other, the Medical College of Virginia, is located at Richmond, where hospital advantages are available. The Medical Department of the University cannot, in its country

location, afford to its students a *practical* medical education; and we can readily see why it operates as a tributary to Philadelphia, rather than to a rival school in Richmond. The *Virginia Medical Journal* is laboring to effect a union of the two, by transferring the Medical Department of the University to Richmond, and blending it with the Virginia Medical College, thus concentrating effort, with the intention of elevating the standard of acquirement, and making the degree of the consolidated school "the first medical honor in America." God speed the laudable enterprise; but we fear that, even with the consolidation in Richmond, competition with Philadelphia, for numbers, will paralyze effort to materially lengthen the term of study or elevate the standard of acquirement. So, too, with all schools whose organization is such as to make the amount of income dependent upon the number of students.

The University of Michigan is fortunately situated in this respect, in reference to the needed reform; and she has consequently a *duty* to perform, from which she cannot shrink without loss of credit. Entirely independent of patronage, *she can make her own terms with those who seek benefits at her hands.* Nor is this her *mere privilege.* It is an ABSOLUTE DUTY RESTING UPON HER, in consideration of the great importance of the work, *her ability to perform it*, and the *source* from which her endowment was derived. Originating in the munificence of the General Government, and wisely cared for by State authority, that endowment enabled the Legislature of Michigan, as early as 1836, to anticipate its benefits and organize a University, in all the departments of which education was to be *free and open to all. Free education* thus being secured by organic law, a matriculation fee of only ten dollars entitles the matriculant to the benefits of perpetual scholarship. Enabled by this endowment to offer such advantages, the University of Michigan should enter the field of competition, NOT *a mere bidder for numbers*, but with an earnest endeavor to attain the greatest degree of excellence—to furnish the greatest and most perfect advantages, and to demand the highest grade of scholarship from those on whom she bestows her honors. The specific duties devolving upon her, in the management of her medical department, are:—

First—To require a four years' course of study.

Second—To establish a nine-months lecture term.

Third—To make an attendance of one year upon hospital instruction one of the *requirements* for graduation.

The adoption of these measures of reform, with the transfer of the Medical Department to this city, where hospital advantages could be furnished, would place it in advance of all other schools in the United States; while, unless such transfer is made, and hospital means of illustration are rendered available, it must remain content to rank, like the medical school of the University of Virginia, only secondary in importance, and as a mere feeder to more perfect institutions. Such a position, for its medical school, the profession of Michigan is not prepared to be content with. It is not content that the great advantages afforded by the University endowment should be productive of anything less than a first rank institution. It is not content that a reform, the necessity of which it—in common with the whole profession, throughout the Union,—recognizes, should remain unaccomplished, when ample means for successful accomplishment are at hand. The Medical Profession, at home and in other States, look, at this time, to the University of Michigan for a gigantic step in educational advance.

The expenses of the Medical Department will be no greater in Detroit than in Ann Arbor; while, in Detroit, it can be placed in the highest rank—in Ann Arbor, never. Located in Detroit, where it could offer every advantage to the student, *with the ability to dictate terms of graduation, without fear of diminished classes*, it would clearly be within the power of the University to institute *all* the desired reforms, and, in so doing, to serve the causes of science and *humanity*. Let her not, then, neglect what should be considered her HIGH PREROGATIVE and SOLEMN DUTY. G.

ANECDOTE OF DR. RADCLIFFE.—Radcliffe, one of the most eccentric and witty men of his time, lived, at one time, in Bow-street, Covent Garden. Between his garden and that of Sir Godfrey Kneller, the king's painter, a door had been made, to allow the Dr. the pleasure of visiting the rich collection of exotic plants contained in the latter garden. Radcliffe's servants became depredators; Sir Godfrey remonstrated; and, the grievance continuing, Sir Godfrey sent his compliments to Dr. Radcliffe, accompanied by a threat to lock the door. The wit answered that Sir Godfrey might "do with the door as he pleased, *so he did but refrain from painting it.*" "Did my good friend Dr. Radcliffe say so?" cried Sir Godfrey.—

"Go back, present my service, and say *that I can take anything from him, but his physic.*" This anecdote has been immortalized in verse:

> "Quoth Kneller, 'I'll certainly stop up that door,
> If I ever find it unlocked any more.'
> 'Your threats,' replied Radcliffe, 'disturb not my ease,
> And so you don't *paint* it, e'en do what you please.'"

The Preparations of Garnier, Lamoreux & Co.—These truly elegant medicines answer, most fully, a want which we have long felt. To so large a proportion of patients are the odor and taste of most medicines highly offensive, that it not infrequently prevents a full obedience to orders. Nor is this the only evil experienced by the physician—he has seen former patients seeking after strange gods, actuated by no other motive. Pharmacy, to remedy this evil, has made a rapid advance; but in no other instance has it accomplished so much, as in the one under consideration. Cleanly, odorless, and giving to the tongue only the taste of sugar, these pills and granules are readily swallowed, even by the most fastidous; while the easily-soluble nature of the covering exposes the medicine, almost immediately, to the action of the stomach. They have become to us almost a necessity, in making many prescriptions.

Treatment of Scarlatina.—A contributor to the *Nashville Journal of Medicine* has adopted the following treatment in scarlatina, and has found it highly successful:

"Commencing with mercurial purgation, followed, as soon as an action was produced, with sedative doses of quinine. Giving it—no matter how quick the pulse—and repeating it again and again, until its peculiar effects ensued; after which there was always an amelioration of the disease. Neither did I neglect the throat—using poultices externally, with some one of the numerous gargles, the simplest and best of which was an infusion of kino, or, if not this, nitras argenti directly applied to the inside of the throat. Sometimes combined with the quinine small doses of ipecac, when the stomach was not irritable; but to the quinine alone I looked for the great good, and I can say, of a truth, it seldom failed me."

Mr. Stearns' Circular.—Mr. Frederick Stearns was appointed by the American Pharmaceutical Association, at its last meeting, a committee to report "upon the abundance, commercial value and medical importance of the medicinal plants of Michigan;" and he has addressed a circular of inquiry to the different members of the profession throughout the State. We trust that physicians receiving his circular will make a prompt reply, conveying such information on the subject as they may possess.

Cicuta Maculata.—Dr. J. C. Norton, of Homer, Minnesota, in a report upon the botany of Winona County, says of the cicuta:—"In small doses, it is, according to my experience, a *sure cure* for *nervous* and *sick headache.*"

CORRESPONDENCE.

Vermont, Nov., 1857.

"A Small Matter, but an Important One"— If True.—Surely this is an age of wonderful discoveries. Man has hitherto been limping through the world upon unequal legs, utterly unconscious of the "fact," ignorantly supposing himself to be "in form and moving express and admirable." But the truth, unwelcome though it may be, has at last been discovered. There is "a *natural* difference in the length of the legs." (*See Med. Independent, Nov.*, 1857, *p.* 548).

Dr. Nelson's article would leave the impression that this difference is quite common. At least he and his "several friends" are

> * * * "curtailed of this fine proportion,
> Cheated in figure by dissembling nature."

Of course I do not design to deny his "fact," as only negative evidence can be brought. Besides, "it is never a pleasant duty to call in question the accuracy of another's statements as to what he has himself alone seen and experienced."

But, for "the application of this knowledge" correctly, attention must be paid to the method of measuring. False measures, like false weights, may deceive. It is easy to apply the tape-line, but it is not as easy to place the body in such a position that the line shall show the truth. The usual method of measuring the person being in the

dorsal-horizontal posture, is manifestly the true way. But certain precautions are of importance. The body *and limbs* must be in the same straight line. By extending a line from the top of the sternum over the symphisis pubis, and continuing it on beyond the feet, the legs may be brought accurately into line. Without this aid to the eye, a deviation, which will make considerable difference in the measurements, may pass unnoticed. The pelvis should now be adjusted so that the line joining the spines of the ilia shall be exactly at right angles to the former line. If one leg has been for a long time wholly diseased, some support will be required under the buttock of that side, to supply the deficiency caused by the wasting of the muscles. Being now satisfied that the position is perfect, the point, from and to which the measurements are to be made, demand attention. The anterior superior spine of the ileum, and the inner maleolus are commonly selected. These are fixed points, well defined and easily found, and hence admirably adapted to the purpose. The patella is movable, and presents no prominent points, hence very little reliance can be placed upon measurements to or from it. The condyles of the femur and head of the tibia are large, rounded, and furnish no distinct point from which to measure.

In the case alluded to by Dr. Nelson, I did measure in the above manner, using all the precautions described. He did not measure in this way. As he has entirely forgotten to tell his method of procedure, I may be allowed to describe it, that the profession may know the different modes, adopting whichever seems the most accurate and reliable. *He* placed the boy in the upright position, with his back to the wall, and endeavored to obtain the difference in the length of the legs by measuring the thickness of books placed under the heel of the shortened leg; when lo! it required only two and a half inches, instead of three inches, to make the boy appear to stand perpendicularly.

Now listen, ye lawyers, and learn a lesson in logic. The Plaintiff has overstated the amount of deformity, therefore his "mainstay is knocked asunder." There is now little necessity of investigating those minor points of original treatment, and after care and management of the broken bone.

That the boy had a bad leg, be the shortening two or three inches, is indisputable; whether from the surgeon's fault or from his own,

or from that of his attendants, or from neither, I certainly do not feel competent to decide, not having heard the evidence upon either side. The Defendant, a surgeon of good standing and character, has had my sympathies from the commencement of this suit, which, I suspect, adds another to the list of malicious prosecutions, instigated by enemies, and carried forward by one anxious to avoid the payment of a large bill.

Let me remind Col. Nelson that when a man publicly proclaims his own wonderful powers and superiority, whether exhibited in drilling the militia of a country regiment, or in matters of science, however amusing or riduculous he may make himself appear, it is his own affair. But when he becomes so intent upon blowing the trumpet of glorification that he tramples unceremoniously upon the bystanders, and certainly when he intentionally endeavors to knock down another, that he may elevate himself upon the fallen body, to make his notes reverberate more widely, he must not expect impunity.

"One Person."

Ann Arbor, Nov. 15th, 1857.

Editors Medical Independent:—

Allow me, through your journal, to make a few observations on the *advantages* and *disadvantages* pertaining to the course of instruction in the Medical Department of our State University.

With regard to the advantages, I can truly say, that there is no better plan of instruction, in any medical school in the Union, for the *Junior* student, than the one adopted by it. It has a six-months lecture-term, with but four lectures per diem,—thus giving the student ample time for the study of the various branches, and acquiring a thorough knowledge of the principles and theory of the science.

Its course of Analytical Chemistry—an admirable and unsurpassed arrangement, giving the student the opportunity of manipulating and experimenting in chemistry,—constitutes the only true way of acquiring a complete knowledge of the science.

The disadvantages are full as great to the *Senior*, as the advantages are to the Junior student. Clearly, the lack of *clinical instruction* is the great disadvantage the institution now labors under. The senior student, before starting out upon the noble calling of his profession, requires clinical instruction, to enable him to manipulate

with the knife in the varied operations of surgery, and prescribe with confidence and skill at the bed of the sick; for there are ever small links of connection between symptoms—indescribable relations, which fix the practiced eye and decide the experienced judgment,—an idea of which even the most accurate writer or speaker fails to convey to the student.

Clinical iustruction is as essential for the completion of a medical education, as practical work is to the young mechanic, in enabling him to undertake work upon his own responsibility.

Medical schools located in large cities possess this advantage of clinical instruction, which accounts for the resorting of numerous physicians, graduates of country schools, to them, to complete their education; and also of those senior students from smaller schools, who go for the same reason. It is said by some, that the only advantages afforded by large cities, are for *surgical* clinics. Not so, where hospitals are regulated for the instruction of students, as they should be, and with a lecture term sufficiently long to give the student time for observation. They then afford the greatest advantages in all practical departments.

Large cities, too, furnish patients for *medical* clinics, held at the college, where such cases present themselves, as would naturally resort to the offices of physicians, in the absence of the college clinic. The clinic thus becomes at once a source of relief to the city physicians, and a real charity to the patient,—for its advantages are sought by those unable to remunerate.

I see that a clinical course, connected with the University, has been delivered in Detroit, between the lecture terms of the Medical Department; but, so far as I can learn, it amounted to but little. A few only availed themselves of it, and they were poorly satisfied. The place for clinical instruction should be located where the college is, and such instruction should be imparted during college terms, so that a greater number of students may avail themselves of its benefits. No doubt many would attend during the intervals of the lecture term, if conducted as it should be.

The system of medical instruction, adopted by the Jefferson Medical College, seems to have met with some objection from a certain fogy clique, in your city, as not being in accordance with its high aspirations in medical education; but, in my opinion, there are few schools which possess greater advantages for the senior student than

it. The only alteration to better it, would be a longer lecture term, and fewer lectures per day.

Having attended our own institution, and also those in large cities, I have seen that the advantages of the latter, for the senior student, far surpass those that can *possibly be afforded in any country school.* I feel it a duty to the profession of our own State, to express my views, and endeavor, with them, to make our own institution second to none in the Union. Surely, it is endowed with advantages, such as none others are. Requiring scarcely any pecuniary means on the part of the student, to avail himself of a thorough medical education, it would undoubtedly be *the model school*, could it have the benefit of clinical teaching, in the absence of which we find the *only* reason that keeps it in the background of medical instruction. W. L.

Owosso, Mich., Nov. 13th, 1857.

Editors Medical Independent:

I have noticed with pleasure in several numbers of your excellent journal, remarks upon *Clinical Instruction*, with suggestions recommending the removal of the Medical Department of the University of Michigan to Detroit, where the same can be made available.

That the interests of the medical class, and the wants of the profession of Michigan, imperatively call for this change, no one can for a moment question. Being a graduate of the Medical Department, I have ever entertained for the University that peculiar filial regard that all cherish for their *Atma Mater;* and while I would deprecate any measure that had not for its aim the glory and prosperity of the University, I, on the contrary, hail with joy a plan which, if carried into operation, must place its College of Medicine and Surgery in the foremost rank of American Medical Schools.

It may be argued by some that arrangements have already been made, and carried into operation, for clinical teaching; but it must require but little reflection for the most obtuse mind to appreciate the *impracticability* of the present plan.

A clinique situated forty miles from the school to which it purports to belong, can be one only in name; and any one who has the hardihood to contend that the present arrangement meets the wants of the profession, is, in our humble opinion, much better skilled in sophistry than in logic.

Now, in order for the student to avail himself of the clinical course, he must spend the summer in Detroit, after his winter course in Ann Arbor, when, in our judgment, it would be far more to his interests to take the two courses in connection, to say nothing of increased expenses, and being pent up in a city at a season of the year most irksome for a residence in a large town; and when, too, he needs rest from his previously protracted labors.

And if the present arrangement offers no additional inducements to the students, will the friends of the measure tell us in what way it is going to advance the interests of the department, and how it will add to the glory of the institution?

The inducement is certainly not in the clinique *at Detroit*, because the student may attend the lectures at Ann Arbor, and then avail himself of the advantages of more extensive hospitals, to be found in our larger cities, without incurring any greater expense than under the present arrangement.

But remove the Medical Department to Detroit, where the two courses may be taken in connection with a clinical course of *six*, instead of *two* months, and where *medicine*, *surgery*, and *obstetrics*, each receive the requisite attention, then we shall have a rational system of clinical instruction, one in reality — not in name only; a system that will offer, not only strong inducements to the student, but to those members of the profession who, from time to time, wish to avail themselves of the advantages of lecture and clinical teaching.

That schools not furnishing this important element of medical education, are soon to be numbered among the things that were, is evident from the manner in which they have fallen off in the last few years.

It is urged by some, that to remove the Medical Department from Ann Arbor, will mar the University system. Now, if to remove a branch of the University that has not the remotest connection with the other departments, save through the President and Board of Regents, is going to disturb the harmony of the system, as a whole, will they tell us what the result will be *to divide the branch itself*, leaving a wing in Ann Arbor, and locating the other in Detroit? Such arguments defeat their own object, and require but the sober second thought to be repudiated. E. L.

Stockbridge, Nov. 16, 1857.

Editors Independent:—

An editorial in your November number, with "*Professional Honor*" for its text, together with several other articles of a similar nature, which have come to my notice of late, have induced me to pen the following from my own observation:

During the short time I have practiced medicine, the number of applications I have received from various individuals, in almost all grades of society—from the highly-respected wife and mother, as well as the degraded unmarried unfortunate,—to "help one out of a scrape"—"give nature a start"—"do something for me," &c., has been so great, that I have queried whether my unfortunate experience in this direction has not been an unusual one.

To all attempts to convince these applicants of the danger to life and injury to health, as well as the immorality and criminality of such proceedings, the unvarying reply has been—"*I don't care: I will do it!*" or "*If you won't do it, I will!*"

Now, it is not to be presumed that these individuals are entirely regardless of their own lives, and indifferent to morality. The truth is, they look upon abortion (especially in the earlier months) as widely distinct from infanticide. They have been educated to this, as well as to the belief that physicians are in the possession of some drug which, seldom or never endangering life or health, will always produce miscarriage.

At the present time, they have but to look to public opinion for such authority; which, in its turn, was created by the energetic perseverance of the charlatan, both through the instrumentality of his private practice and the public prints; and negatively sanctioned by the silence of the regular profession.

With such opinions as these, coupled with the gaudy and alluring temptations of modern society, what wonder that frail mortals should desire to enjoy the pleasures of *venery*, and shun the responsibility of *maternity? Hence the enormity of fearful consequences!* Set public opinion aright, by the relation of intelligible (and consequently convincing) facts, and you strike a blow in the right direction.

A few brief remarks, relative to a particular case, may not be unacceptable. On the third day of November, 1856, I was called to the bedside of Mrs. K., a strong, well-proportioned lady, of apparently about thirty years of age, and mother of two children. The

husband informed me that two or three days previously she had miscarried (at about the third month), and had "had a bad diarrhœa ever since;" also that from the first she had, with great difficulty, merely been able to articulate *monosyllables.* I found her bathed in perspiration, with a largely-distended and tympanitic abdomen, and pulse about 150. She strongly denied having taken any drugs, resorted to any mechanical means, or sustained any accidental injury. About thirty hours afterward she expired.

In the course of a few weeks, a neighboring woman, who was also *enciente*, acknowledged (very confidentially) that she and Mrs. K. had for some time been drugging themselves unsuccessfully, and that Mrs. K., becoming desperate, had swallowed, at one time, nearly f. oz. ss. Olei Sabinæ. Whether this be true or not, the probabilities are that she took a sufficiently concentrated potion, of some kind, to partially disorganize the vocal organs, produce abortion, peritonitis, and *death.*

November 16*th*, 1857. G. E. C.

Wyandotte, Nov. 17th, 1857.

Editors of Medical Independent:

Will you please give the following notice an insertion in your December and January numbers.

MEETING OF THE MICHIGAN STATE MEDICAL SOCIETY.

In accordance with the Resolution passed at the last meeting of the above Society, the next Annual Meeting will be held on the 3d Wednesday (20th) of January next, in the city of Detroit, at ——— at 10 A. M.

Members of Committees please take notice and prepare themselves accordingly. E. P. Christian, *Sec'y.*

THE

Medical Independent,

A Monthly Review of Medicine and Surgery.

EDITED BY

MOSES GUNN, A. M., M. D.,

PROFESSOR OF SURGERY IN THE UNIVERSITY OF MICHIGAN,

AND

L. G. ROBINSON, M. D.

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THE
MEDICAL INDEPENDENT:
A MONTHLY
Review of Medicine and Surgery.

VOL. 3. DETROIT, JANUARY, 1858. NO. 11.

Original Communications.

ARTICLE I. *Tubercular Phthisis the Result of Imperfect Cell Action.* By R. E. HAUGHTON, M. D.

(CONTINUED.)

The fact, which has so often been proved by analysis, and by so many chemists, that the deposit called *tubercle* is principally composed of albumen; that, also, the principal agent of the blood, chyle, and lymph, is albumen; and that the albuminous materials of nutrition are converted into fat by the liver;—has led me to regard tubercle as the result of certain changes in the vital actions, by which albumen is imperfectly vitalized, and deposited, as tubercle, in the lungs; and, in the liver, converted, by a pathological state of that organ, into fat, and there deposited—producing what is called fatty degeneration of the liver, which is a common attendant upon well-marked tubercular consumption.

The action of the liver, as well as its abnormal condition, is understood by reference to this general law of the economy —"That two organs, the office of which is partly the same, or entirely so, sympathise with each other; and if one is impaired, or becomes so by diseased conditions, the other takes on increased labor, to compensate, in some measure, for the failure which has thus taken place.

The lungs, by reason of deposits going on in their struc-

ture, do not receive the necessary amount of oxygen—hence less carbon is disposed of, and the liver must dispose of more; and the albuminous elements of the blood and of the food, which are principally composed of carbon, are converted into fat,—hence the fatty liver. So, also, is this true of the action of the skin, which, in health, is an extensive emunctory, eliminating various elements, among which is carbon, an element of destruction, by reason of its retention in the system.

Every person is aware of the sensitive condition of the skin, in reference to cold. This condition is the result of the failure of calorification. The fatty matters, instead of being used for the purposes of respiration, to generate animal heat, are deposited in the liver; and here, then, we have failure of the lungs, the first mode of removing carbon; next, the skin, which is destined to eliminate more carbon than even the lungs; and, thirdly, the liver fails to eliminate carbon, but works it up and deposits it, as fat,—the whole process, from its inception to its close, a morbid one;—and, therefore, the carbon of the food, and tissues, and blood, failing to be eliminated, and the liver not being able to consume it all in fat, the balance is a foreign body, to all intents and purposes, and no organ can eliminate it. Hence, it is deposited in the various organs (as tubercle); and it holds a definite relation to such organs, in point of priority of deposit, as the organs are more or less active as its eliminators. The coldness and chilliness, of which consumptives so much complain, in this climate, is here explained and understood; and we have no means of changing this condition of things, while the chain of morbid events is unbroken.

Carpenter says, in reference to the conversion of albuminous or protein compounds into fat, that "it must always be considered, or regarded, as a pathological change; and its spontaneous occurrence must be admitted as valid evidence that the fat, which is generated in the liver, may be formed out of the products of the disintegration of the albuminous tissues, or by the metamorphosis of the albuminous portions of the blood and of the food."

The organic materials, necessary for the genesis of tissue, are both albuminous and fatty; and these are eminently producible from the elements of food, by the action of the digestive organs. The fatty elements of nutrition are important in their relation to the diseases of which we are writing; and this importance is shown in more ways than at first supposed. For instance, saccharine and oleaginous food is converted into fatty matters, and, in healthy play of the vital forces, is used to support combustion,—the balance being deposited, as adipose tissue, throughout the body. Let, however, the vital actions be changed, and the elements of nutrition diverted from their legitimate channels, and the fatty tissues are taken up and burned in the process of respiration, and a progressive emaciation takes place; the liver converts albumen into fat, which is deposited in its own structure; and the system fails to produce a proper temperature, by reason of a failure in the proper relation of the elements which support combustion,—one of which is the carbon of the fatty matters, which ought to be supplied in the blood. The temperature of the body is below par, and there is nothing now to support combustion and thereby generate the heat necessary for the enjoyment of health; and this failure in calorification is but another step in the progress of this tuberculous disease, which acts both backward and forward,—backward by increasing the deficiency in all the vital actions before described, and forward by producing congestions and, finally, local inflammations, which hasten the disease to its fatal termination.

Among the causes in the production of phthisis, deficient oxygenation stands prominent; but it is not the great first cause, as has been taught, and is now being taught, by some modern writers. It is a cause growing out of other causes and other circumstances. In an array of causes, I have dwelt upon the primary conditions, pathologically, and have remarked that hereditary influence, indigestion, impure air, want of exercise, emotions of the mind, depressing conditions of life, low, damp places of abode, a want of attention to

cleanliness, both of person and dress, are among the causes which impair the nutritive functions, in such a way that disease results. Contracted chests, from errors in dress; imperfect breathing, as one of its results,—even in a pure atmosphere—will be as dangerous to health as if the elements of the air were deficient; and thus failure in the oxygenation of the blood would take place, not from want of air, but from want of the use of it. In other words, the chest being contracted, imperfect expansion would result, and want of oxygenation.

But this is not the primary process. It exists in extraneous circumstances, and causes which affect, mechanically, the organs of respiration. Deficient æration of blood is not, then, a primary failure, in this disease, but an important one, and it should not be overlooked, but remedied. "Want of oxygenation converts albumen into fibrin," says Dr. Gardiner, in detailing his experiments. If this be so, it is evident that it is a process directly detrimental to the system—as fibrin is an element of decay, as held by some authorities,—an element of the inflammatory act in the economy; hence is one of decay—and requires elimination. Also, it is the conversion of an element of nutrition into one of waste, and thereby the amount of this conversion has a direct bearing upon the healthy nutrition of the body. Emaciation is the result of such a process, and this we see so fully displayed in the condition of the lungs, called tuberculosis.

The changes, then, wrought during respiration, are wonderful; and, according to Dr. Southworth Smith, when mind and body are in a tranquil state, the amount of air inhaled at a single inspiration is about a pint. If we count eighteen respirations per minute, that many pints of air are received in the same time; which, in an hour, would amount to 1,080 pints. This, then, we take as a standard for health; and this amount of air is necessary to purify and aerate the blood, the liquid essence of food, the future solids of our own bodies, so that all the functions of life may be carried on, and thus render existence pleasurable and happy. Until acted upon

thus, the blood, to all intents and purposes, is dead,—yea, more, it is a poisonous stream, carrying, on its red currents, death to all portions of the body—totally incapable of repairing structures which are worn and decaying, but assisting in the disintegration, waste and decay, which then rapidly take place. Vitality is on the wane, and the pestiferous poison, which is slowly insinuating itself into the inmost recesses of the human system, though brought to the lungs to be consumed and expelled, is retained, and again passes on its course round the systemic circle, with increasing influence for evil; and thus the individual who may be the unhappy sufferer is worn out by influences not then controllable, till death closes the scene. What is this poison? Carbonic acid. To breathe in an atmosphere of this kind is death, as rapid as it is certain. Imperfect respiration increases the amount of carbonic acid, which goes on increasing till an arrest of all the vital processes takes place.

But when the lungs are unimpeded in their action, and a pure atmosphere is furnished,—which is the case the universe over, except where man's operations contravene the laws of God,—then the conditions are present for the greatest enjoyment of health. It is the oxygen of the air which kindles the fires of our being. It is this element which is, within us, the principle of vital action, working out the great destiny of humanity. It is this element, which, in the early morn of human existence, rushes into the lungs, its proper recipients, and, by its influence upon the blood, wakes to life the inert, slumbering brain, which, by this power, sends forth its influence to regulate the whole vital machinery. Oxygen, then, is the force, or agent, which animates and reanimates the material universe of God. There is no power, save in oxygen and oxygenation, which can produce the manifestations of nervous power; and there is no power, save this, which can prepare the blood for all its proper uses in the human economy.

Then we come to another proposition, which may be startling, as well as new, to some: The motive power of the

blood is in the oxygen contained in the lungs; and, unless this play of affinities between the oxygen of the air and the elements of the blood existed, no respiration, no arterialization, no circulation of the blood, no generation of (brain or nerve) power could occur; and, consequently, the vital processes, which follow as regularly and successively as the links of a chain, would not take place. The reader will pardon this digression, to consider the importance of perfect respiration in all the vital processes. We see clearly, that whatever impairs the lungs, or deteriorates the atmosphere, reacts upon health; and, if such conditions exist long, permanently-impaired health and life are the results. Here "we see the adaptation of the prescription, *Live in the open air*, to such a condition of health, where digestion and respiration are the important functions interfered with; for how is it possible any human being can enjoy health, when food is not digested or breathing not half performed? The wonder would be, if such disease had not occurred to afflict fallen humanity.

But we have looked at the causes of, and progress of, tubercular disease—let us see if such causes have no remedy. We hear it often remarked, "There is no cure for consumption: let the patient's course to the tomb be made as smooth as possible"—and the patient, as well as friends, settles down upon this view, and makes no effort, either of mind or body; and a deadly despondency of mind seizes hold of him, which, with the confinement and listlessness, is enough to originate disease. Let the reverse take place in the actions of those who are diseased. Exercise in the open air, ride, walk, hunt, fish, travel, sail on the waters of our beautiful lakes, enjoy society, invigorate mind as well as body; and the nervous power improves, digestion improves, of course, respiration improves, and the curative actions are in full play. I have said, and I repeat it, medicines, without these influences, never did cure a case of consumption, and never will. But such influences have cured all those who have been cured—of whom not a few are known to the profession. The opinions of those eminent physicians, Dr. Physic and Dr. Norcum,

are to the point. Dr. Norcum gives a history of his own case, which was cured, in a letter to his preceptor, Dr. Physic. Says he, "If I were asked what remedy rescued me, I would say, 'It was a life of hardy exercise and of unremitting toil, activity and exposure.'"

This is the experience of the writer of this paper. After having been reduced by night-sweats, cough and purulent expectoration, till I had to be assisted to mount my horse or get into my buggy, yet I continued exercise in the open air, expanding my lungs freely every day, with frictions of the whole surface. I am cured, and have been able for all the fatigues and exposures of my profession for four years. Drugs never impaired my stomach, but the means thus described were used diligently. I increased the capacity of my chest, by expansion, 150 cubic inches of air, by measurement of a pulmometer, in one year; and this increased capacity for air arterialized the blood, improved digestion, along with exercise; and now there is not a man enjoys exercise, and sleep and food, as I do,—or who enjoys, from month to month, more uninterrupted freedom from all that afflicts humanity, in the way of disease. This is my experience with this disease, in a few words; and it corresponds with Dr. Norcum's and all those who have an experience in its cure.

Do not let me be understood as waging a warfare upon medication in this disease; but I do say, most explicitly, that the pathological conditions in this disease are not removable by medicines introduced into the stomach. The reasons are plain, and have been given. Most medicines impair the tone and condition of the stomach, whereby the trouble is increased. As I have shown, this organ is always impaired —why make that impairment worse? If we had a due supply of healthy nervous power, superintending the vital processes, we might gain more from medication. But we have not—hence some other means must be resorted to to bring up the tone of the nervous system, and through it all the vital actions of the economy.

The acts of secretion are under the control of the (excito-secretory) system of nerves; and these acts of secretion are all at fault, as has been shown in another part of this paper. Why is secretion at fault?—Because the law of cell development is an hereditary one; or, in other words, the law of hereditary consumption is transmitted from parent to child, and the impairment of the nervous system progresses, *pari passu*, with the development of the disease.

It will be proper, in the investigation of this subject, to examine some of the modes of medication, and the remedies used, as recommended by some of our eminent medical men of the present day. Among these are the use of intoxicating drinks; the use of cod-liver oil (jecaris aselli); the use of iodine preparations; emetics; venesection; nitrate of silver; injections into the lungs, by the introduction of an instrument beyond or below the rima glottidis; and, lastly, the treatment by inhalation. These are among the most prominent and later methods of treatment of disease of the lungs—which we will notice briefly. Here let the reader bear in mind, that Nature's indications are presented to us in a demand for more nervous power, better digestion, more oxygen; and these methods of medication do not furnish the remedy thus demanded and required.

We propose to consider the effects of any stimulant, in the shape of an intoxicating drink, as given for a remedial agent in tuberculous affections of the lungs. The points of interest will be, the effect of such a remedy upon the stomach, upon the nervous system, upon the circulation, and upon the function of nutrition. Upon this last function, its most important bearing will be found, as we have asserted, in the fact that this disease is one of nutrition. Hence, if alcohol, in any of its forms, permanently benefits nutrition, then is the remedy a good one. If not, then it is injurious.

But let us return a little, to examine the effect of such a stimulant upon the stomach. In the condition of the stomach under consideration, it has failed to digest food. The effect of a stimulant is to increase its power for the time being.

Suppose it does—the absence of such stimulant, after this temporary excitement, produces greater depression. Alcohol stimulates the coats of the stomach, and there is vascular fulness of the vessels, redness of the mucous coat, and all the evidences of irritation. Depression follows this condition.

But the effect does not stop with the stomach. The nervous system feels its force and increased power under the stimulus, and afterwards the depression—which thus reacts upon the stomach and the whole chain of vital actions. This stimulation and depression soon impairs the wonted vital energy; and, sooner or later, the digestive power is worse than when begun, and only responds to the stimulus in much increased quantities. This soon ends in excess, and brings all the evils of excess upon the system. In this influence, there is an exhaustive power, not only upon the stomach, but upon the vital energies. Under the use of such a stimulant, the stomach is comparable to a race-horse, goaded by the whip and spur of the rider to momentary or temporary labor beyond the accustomed power,—and the result is, the horse comes out of the race exhausted, trembling in every fiber and muscle, from over-taxation; and, the next time, will require more goading and spurring to accomplish the very same labor. There is then a loss to the vital energy, and the stimulant becomes, in its remote effects, a depressing agent,—permanently so, where the vital energies of the system have been impaired, so that this stimulation is not responded to and sustained for the future benefit of these forms of disease.

But we have another objection to the use of alcohol, in any form, as a stimulant to digestion. It goes into the stomach with the food, and dilutes it,—which is opposed to one of the well-known laws of digestion, which is, that the food requires no other diluent than the salivary and gastric fluids, and when it takes place, the digestive process is arrested, because the fluids of the stomach are so diluted that they do not act upon the food in their accustomed manner. Moreover, it (the stimulant) is not assimilated, but is absorbed directly into the blood, diluting and impairing it in such a way, that the

blood is not fit for the building up of healthy tissue, or the proper nutrition of all the component parts of the organism. Again, alcohol acts as a poison to the animal economy; and the habitual use of any poison, either in health or disease, evidently contravenes nature's laws, and, of course, produces pathological conditions of its own. Alcohol cannot be assimilated, but, wherever found, presents all its peculiar characteristics of smell and taste; and, when fire is applied, burning with its peculiar blue, lambent flame. It never acts upon the alimentary products, so as to render them more nutritious or more easily assimilated, but exerts its own peculiar, specific action, *independent of all other influences.* (Its effects upon the nervous system, &c, will be the beginning of the next paper,—continued by a consideration of the other agencies before mentioned.)

P. S. In the preceding portion of this paper, on page 525, November number, 7th line from the top,—for *carbon*, read *carbonic acid.* R. E. H.

(*To be Continued.*)

ARTICLE II. *Chapters from an Unpublished Monograph.* By H. R. SCHETTERLY, M. D.

Calorification an Effect of the Combustion of Carbon and Hydrogen by Electricity.—Various theories have been invented to account for the production of animal heat; but all of them have been disproved and abandoned, except two and their ramifications. One of these attributes the evolution of heat in the living system to the combustion in it of carbon and hydrogen, and is advocated by Liebig and others. The other attributes it to nervous action, and is advocated by Chopat, Brodie and others. Both are based upon experiments on living animals; and each party tries to refute the theory of the other, by urging objections against its hypothetical and consequently weak points. It will be found that truth lies between them.

The temperature of the human body, and that of all warm-blooded animals, generally, is essentially the same in the torrid and in the frigid zones; but—as the body may be regarded in the light of a heated vessel, which cools with the greater rapidity the colder the surrounding medium,—the fuel necessary to maintain its heat must vary in different climates. In the animal body, the fuel must be supplied in the food; and, with a proper supply of oxygen to combine with the fuel,—with carbon, forming carbonic acid; and with hydrogen, forming water,—and an agent (electricity) to kindle this combustible matter, we obtain the heat from the combustion. According to Liebig, the combination of carbon and hydrogen with oxygen must generate as much heat as if these two gases were burned in the open air; and that this combustion is amply sufficient to maintain the human and animal body constantly at the same temperature, he shows by calculation, thus:—An ounce of carbon, burned, according to the experiments of Despretz, evolves fourteen thousand and sixty-seven degrees of heat; and thirteen and nine-tenths ounces—which, according to Liebig's numerous experiments, is the average quantity contained in the food eaten by a man in twenty-four hours—will therefore evolve one hundred and ninety-five thousand five hundred and thirty-one degrees of heat. This heat would suffice to boil sixty-seven and nine-tenths pounds of water, of the temperature of ninety-eight and three-tenths degrees—being the average of the human body,—into vapor. Supposing, now, the quantity of water vaporized through the skin, in twenty-four hours, to be three pounds, there will remain, after deducting the amount of heat required to maintain the body at its uniform temperature, one hundred and thirty-seven degrees of heat for radiation, and to warm the air expired and the excrementitious matter, —a quantity amply sufficient, especially since the hydrogen, which evolves a much greater amount of heat in proportion to its quantity than carbon, has been omitted in this calculation. If the quantity of carbon and hydrogen supplied as food be insufficient to maintain the body at its uniform tem-

perature, the fat previously accumulated in it is liquified and again absorbed by the blood-vessels, to supply the combustible matter necessary to maintain the vital functions of the organism; and, when this is all consumed, the muscles, membranes, and even the brain, are gradually appropriated to the same purposes. Hence the time required to starve an animal to death depends on its fatness, on the state of its activity, on the temperature of the air, and on the supply of water.

The facts urged in favor of the theory of combustion are principally as follows: If an animal be entirely deprived of food, it gradually cools down, at first slowly, and then more rapidly, to about seventy-nine degrees, when it dies, at the same temperature of its body at which it would die from excessive cold if it were supplied with its natural quality and quantity of food. It is evident that, during the cold season of the year, and in cold climates, more heat is radiated from the body than in warm seasons and climates; and, to preserve the natural temperature, that is essential to health and life, the quantity of heat radiated must be made up in the quality and quantity of food, or the radiation must be diminished by confining the heat generated in the system with clothing,—or by both these means combined. Accordingly, during the cold season, in temperate climates, the appetite craves a kind of food richer in carbon and hydrogen—such as the fat of animals, sugar, etc.,—than it craves during the warm season; and navigators and travelers relate astonishing tales of the quantity of fat—such as the blubber of the whale the seal, the sea-horse, and of other animals,—eaten by the Esquimaux, Samoyedes and Siberians. "A fat calf, weighing two hundred pounds," says a northern writer, "would serve five or six good Yacuti for a single meal." A Samoyede has been known to eat sixteen pounds of flesh and a dozen tallow candles, at once; and a Yacuti devoured twenty pounds of rich rice gravy, with three pounds of melted butter, and whiskey to match, at a single meal, though he had breakfasted before. The animals of prey, in the Arctic regions,

far exceed those of the torrid zone in voraciousness; and both men and animals are soon frozen to death when in a starving condition, as Napoleon's retreat from Russia testifies. In those inhospitable regions, too, the animal temperature is four or five degrees higher than in temperate regions; and animals, abundantly supplied with food, are much fatter there than here.

From these and other facts, it is very manifest that the materials from which animal heat is produced (*i. e.*, electricity set free) are supplied by food, and must be conveyed into the blood as constituents of the chyle. By many experiments, Liebig and others ascertained that the quantity of oxygen inspired with the air, by a healthy man, in twenty-four hours, amounts to thirty-two and a half ounces; and Liebig asserts that none of this remains in the system, the whole of it being expired again, in combination with carbon and hydrogen, in the form of carbonic acid and water, either through the lungs or the skin. The quantity of carbon contained in the food, per diem, is thirteen and nine-tenths ounces; and if any of it is not oxydized, it is excreted by the liver with the bile.

Now, since the oxygen contained in the inspired air enters into the blood contained in the arteries; and since the veins return the blood, laden with carbonic acid, to the lungs, to be expired, it is evident that the oxygen must have been combined, in the arteries, with the carbon contained in the blood, and must thus have formed the carbonic acid,—for there is no other possible source from which it could be derived. But oxygen and carbon, and oxygen and hydrogen, can combine only by the process of combustion; and hence it is obvious that combustion takes place in the arteries, and thus produces animal heat.

The objections to this theory are: That the Bengal tiger and Cape hyena require, in proportion to their size, quite as much food as the Arctic carnivora; and that the vultures of Hindostan and Persia exceed, perhaps, all other animals in gluttony. The voraciousness of the shark, too, even within the tropics, is proverbial. "The people who ride over the

pampas of South America," says Dr. Graves, "at the rate of a hundred miles a day, exposed to the burning sun, subsist entirely on boiled beef and water, without a particle of vegetable food of any kind; and yet they attain to an extraordinary condition and capability of enduring violent and long-continued exertion."

From these facts, it has been hastily concluded that, since the climates inhabited by these animals and people are in the temperate and even in the torrid zones, the voraciousness of the arctic carnivora, and of the northern nations generally, does not furnish any valid evidence in favor of Liebig's theory of combustion; because the former seem to consume as much animal food as the latter, while the radiation of heat by these must be vastly greater than by those.

To dispose of this objection rationally, it must be considered that, in the arctic regions, nature provides against an irregular and casual supply of food, by loading every animal—the fox, the polar bear, the whale, the seal, the sea-horse—in fact every animal and fish—with a superabundance of fat. In the warm climates of the temperate and torrid zones, on the contrary, almost every animal and fish is lean, nearly destitute of fat. Now, as are the conditions of the animals with regard to fat, so is the food of those animals that subsist on them—extremely fat in hyperborean regions, and comparatively very lean in the sunny climes of the South. But fat, of all kinds, contains from seventy-five to eighty per cent of carbon, about twelve per cent. of hydrogen, and from ten to twelve per cent. of oxygen, without any nitrogen, which is essential to the development of the muscular system. On the other hand, muscular flesh contains only fifty-three per-cent of carbon, seven of hydrogen, twenty-four of oxygen, and fifteen or sixteen of nitrogen. Now, it appears, from the comparative composition of animal food in the North with that of the South, that the northern carnivora and nations, who, for want of vegetables, eat nothing but animal food, consume far more combustible matter—carbon and hydrogen,—in the same quantity of aliment, than those of the South; and Liebig's

theory, of combustion being the source of animal heat, is therefore vindicated.

The other theory, which ascribes the production of animal heat to the action of the nerves, rests on the following experiments: When an animal is decapitated, or when the spinal marrow, or the brain, or both, are destroyed, the action of the heart may still be kept up by artificially inflating the lungs with atmospheric air. In such cases, the blood is still apparently changed from venous to arterial; but the generation of animal heat is suspended. Chopat divided the crura cerebra in living animals, anterior to the origin of the pneumogastric nerves. Respiration consequently continued, without inflating the lungs artificially; the circulation went on, and arterial blood circulated in the arteries; but, in twelve hours, the temperature of the animal sank from its natural height (one hundred and four) down to seventy-five degrees, when it died. He then divided the pneumogastric nerves in a dog, and kept up artificial respiration; and, within sixty hours, the temperature of the dog sank to sixty-eight degrees, when he died. He next divided the spinal marrow, below the occiput, in another animal, and kept up artificial respiration; but the animal's temperature fell, gradually, to seventy-nine degrees, in ten hours, when it died. In his subsequent experiments, Chopat found that, when the spinal marrow was successively divided between each of the twelve dorsal vertebræ, in so many different animals, the depression of their respective temperatures occurred less and less rapidly, the lower he made the intervertebral section, and, at the lowest, was imperceptible. In all these cases, the animals evidently died from refrigeration. Hence he concluded that the spinal marrow does not act directly in producing calorification, but that the trisplanchnic nerve must be the organ of this function.

To satisfy himself that this is the case, he divided this nerve, in living animals, where it joins the semilunar ganglion, and the animal gradually lost its heat, and died in ten hours, in the same condition as if the spinal marrow had been

divided beneath the occiput. To satisfy himself on this point, he tied the aorta where it passes through the diaphragm—preventing asphyxia by inflating the lungs,—and the animal, losing its heat much more rapidly, died in five hours.

These experiments prove that both the circulation of the blood and innervation are indispensible to the evolution of animal heat; and that respiration is also essential to it, requires no proof, for, without this, every man and animal would die before it had time to lose its temperature.—The reason of all this will appear presently.—But, to assure himself that the animals on which he experimented died solely in consequence of refrigeration, he killed others by protracted immersion in cold water, without drowning them; and found that the lowest temperature to which warm-blooded animals could be reduced, and life preserved, was seventy-nine degrees; while the lowest temperature, compatible with the continuance of human life, seems to be about eighty-three degrees. But, in the state of hybernation, the temperature of warm-blooded animals has been found as low as thirty degrees; and, in this respect, they seem to be on a par with cold-blooded animals.

Doctors Brande, Thomson, Paris, and others, consider the facts adduced by Chopat completely subversive of the theory that attributes calorification to the combustion of carbon and hydrogen in the system; and substantiative of the theory which attributes it to the nervous system. But they do not explain the manner in which the nerves generate heat, nor do they assign the source whence they derive the materials, by the transformation of which they evolve heat; and their tacit assumption that the nerves can create heat, without producing a change upon something,—secrete it underived, as some assume,—is repugnant to all nature's operations and to every principle of correct philosophical reasoning; for created beings cannot create anything—there is but one Creator,—and nothing can come from nothing. Nor can they adduce even a shadow of proof that the nerves generate

heat by operating, *directly*, upon any materials received into the system as food; for they do not operate directly, but *mediately*, upon such articles. Again, they cannot point out any source from which the carbonic acid and aqueous vapor, so constantly and copiously expired from the lungs and skin, are derived, unless they admit that a process of oxydation of carbon and hydrogen is continually going on in some part of the living system,—and that this process of oxydation is identical with combustion cannot be denied; nor can it be maintained that heat can be generated in the living system without combustion, or that combustion can be maintained anywhere without a corresponding evolution of heat. So that, even if it could be proved that the nerves supply the rest of the body with heat, they could be regarded only as conductors; but for this no one contends. Dr. Dunglison has justly and very properly remarked, that the production of heat cannot be localized; for, as the living system is a very bad conductor of heat, the organ evolving it must be much hotter than any other, and would consequently be consumed in a short time; and this objection he urges against Chossat's supposition that the trisplanchnic nerves are generators of heat. Neither can the advocates of the nervous origin of animal heat explain why both men and animals require so much more carbonized and hydrogenized food, during the cold season and in cold climates, than in warm; nor why animals soon die, of refrigeration, when fed with food that contains all the elements necessary to develop or nourish the organs and muscles, but only a small proportion of carbon and hydrogen,—their organs being loaded with fat,—as was proved by the French Gelatine Committee. Until these facts are rationally explained away, the theory of combustion, as the immediate source of animal heat, stands firm upon an invulnerable basis.

However learned a man may be, if he sets out to defend a preconceived but erroneous hypothesis, he either comes in collision with stubborn and irreconcilable facts, or contradicts himself. The latter seems to be the case with Liebig. In

one place, he asserts that none of the oxygen inspired remains in the system, all being given out again in combination with carbon and hydrogen, in the forms of carbonic acid and water; in another place, he asserts that the combustion, and evolution of heat, take place in the lungs; and, in a third place, he says the blood corpuscles are carriers of oxygen to the tissues. All these statements are contained in his Animal Chemistry—the pages cannot be recalled to memory. Now, it is obvious that, if the oxygen combines with carbon and hydrogen in the lungs, and is all given out in these combinations, there remains none to be carried to the tissues by the corpuscles of the blood. But, besides, this supposition (for Liebig adduces nothing to prove it), that the combustion takes place in the lungs, is obnoxious to Dunglison's objection to its localization in any particular organ, that that organ would be prematurely consumed.

The oxydation (*i. e.*, the combustion) of carbon and hydrogen takes place in the arteries,—not in any particular ones only, but in the whole arterial system,—commencing in the pulmonary capillaries, which receive the oxygen and electricity, and extending through all the arterial systemic branches and capillaries,—not excepting, even, those distributed, for nutrition, to the lungs. To substantiate this proposition, let facts speak:—

First—The carbon and hydrogen are received from the thoracic duct into the left subclavian vein, and are thence conveyed, through the right auricle and ventricle of the heart, into the pulmonary capillaries; and, in the air-tubes of the lungs, also, the oxygen and electricity are separated from the air of the atmosphere, and enter the same pulmonary capillaries. It is here, then, that all the materials of combustion are first brought in relation with each other; and common sense will inform every one that here they must begin to act on each other, in the blood which contains them all. But the blood itself is in continual motion—the whole of it passing through the lungs every minute or two, while some experiments go to prove that it is once in about eighteen or

twenty seconds. The combustible materials, then, are ignited in the systemic part of the pulmonary capillaries, and the current of the blood carries them, in this condition, through the left auricle and ventricle of the heart, to every part of the living system, in this ignious condition,—the motion of the blood and the combustion going on simultaneously. Hence the reason why, in the normal state of the entire organism, every part is warmed in proportion to the amount of blood passing through it, is manifest.

Second—Dr. J. Davy made many experiments on the temperature of the blood, and found that arterial blood is from one to one and a half degrees warmer than venous; Magendie found it nearly two degrees warmer; and Lecanu states this difference to be two degrees. This fact proves that the combustion takes place in the arteries; and that it also continues in the capillaries, at least in local inflammations, is proved by the fact that those parts, in which abnormal action exists, often become considerably heated. Dr. Thomson found that a small inflamed spot, in his right groin, gave out, in the course of four days, a quantity of heat sufficient to heat seven wine pints of water from forty to two hundred and twelve degrees; and Dr. Earl ascertained that a superficial inflammation on the fore-arm, caused by a wounded nerve, raised the thermometer nearly three degrees higher, when applied to the arm, than when placed under the tongue. It has been already stated, on authority of Sir E. Home, that the nerves regulate the quantity of blood circulating in any particular part of the body or organ. Consequently, when irritation exists anywhere, the nerves conduct a larger quantity of electricity to the irritated spot, than in its normal state. This electricity attracts an increased quantity of blood to it, augments combustion, and consequently produces a greater evolution of heat; and, when the inflammation is confined to the skin, these phenomena must necessarily be confined to the capillaries.

Third—All articles of food are composed of carbon, oxygen and nitrogen, with the addition of the minerals found in

the ashes after incineration, and a little phosphorus and sulphur. M. Magnus found in the blood three gaseous elementary substances—*i. e.*, carbonic acid, oxygen and nitrogen,—the hydrogen having disappeared (combined with oxygen and formed water). The two last of these gases—since, in the process of chymification and chylification, all food is decomposed into its elements—seem to have been set free from the food, while the oxygen, inspired into the lungs, is combined with the carbon, also set free from the food, and formed into carbonic acid. Now, since carbonic acid is continually expelled from the blood, and expired, it is not likely that it would enter into the arteries, if it were formed in the lungs; for simultaneous absorption and exhalation, of the same substance, are incompatible, since the former depends upon electric attraction, and the latter upon repulsion; and, besides, according to the very precise statement of Matteucci, Dr. Magnus found one-sixth more carbonic acid in venous than in arterial blood. This proves that carbonic acid is formed in the arteries and systemic capillaries; for, in these, it must continually increase, or its quantity could not be larger in the veins than in the arteries. At the same time, a quantity is exhaled by the skin—and, if so, then the combustion, and evolution of animal heat, must also take place in the arteries, because, where the carbonic acid is formed, there also must the formative process, the combustion, be going on. But that combustion takes place in the vessels conveying arterial blood, is proved by the fact that, when all the arteries conveying blood to any part of the body are tied or divided, animal heat is no longer developed in it, though the nerves remain uninjured.

But, according to Thomson's Chemistry, the artificial oxydation of carbon requires a temperature of eight hundred degrees, and the artificial oxydation of hydrogen, by heat, a temperature of one thousand degrees. He says,—"If pure oxygen and hydrogen gas be mixed together, they remain unaltered; but, if a lighted taper be brought in contact with them, or an electric spark be made to pass through them,

they burn with astonishing rapidity, and produce a violent explosion." The temperature of arterial blood varies in different persons and animals, and also, in different climates, in the same animal,—being highest in the coldest climates. In the feathered tribes, it is between one hundred and four and one hundred and eleven degrees; in human beings, from one hundred to one hundred and four degrees; and in the rest of the mammalia, from one hundred to one hundred and four degrees, in temperate climates; but, in the Arctic regions, Captains Lyon, Pallas and Parry found it to be from one hundred and four to one hundred and seven degrees. Now, when the temperature of the human and animal body is compared with the artificial heat at which carbon and hydrogen ignite, it is perfectly obvious that these combustibles can, in no case, encounter such a temperature as to ignite them, in the living system. But every chemist is acquainted with the fact, that, when combustibles are reduced to an impalpable powder, they may be ignited, even by artificial heat, at a much lower temperature than when they are in mass,—though in no case can carbon and hydrogen, or either, be enkindled at the temperature of arterial blood, without the aid of electricity. The reader will now please to recollect the experiment of Professor Faraday, that when, at the common temperature of the atmosphere, a small bar of platinum is partly immersed in a mixture of oxygen and hydrogen, which constitute the elements of water, parts of these elements combine chemically, evolving heat in proportion to the intensity of the chemical action, and form the same weight of water, as that of the gases which disappear. Now, considering the peculiar relation of platina to electricity, there should be no doubt that, in this experiment, these two gases are combined by the agency of electricity, at the common temperature of the atmosphere; for Faraday states, no less than four times, that electricity and chemical affinity are the same power,—but, in this case, they combine slowly, not by explosion, as in Thomson's experiment. If any one feels inclined to dispute that electricity is the cause of this

combination, let him assign another adequate cause for the production of heat by it.

Here, then, are the reasons why respiration, the circulation, and innervation, are all indispensible to calorification:—Without respiration, there could be no electricity in the blood to ignite the carbon and hydrogen, and no oxygen to combine with the carbon and hydrogen to form carbonic acid and water, preparatory to their being expelled from the system. Without the circulation, the carbonic acid and water could not be conveyed to the lungs to be expired, nor could a fresh supply of electricity and oxygen be inspired, to maintain the combustion,—which must consequently stop when the circulation is arrested. And, lastly, without innervation, the lungs could not be maintained, by the pneumogastric and sympathetic nerves, in a condition fit for respiration; the electricity could not be conducted away from the arteries to the ganglia, and the arteries would consequently become equally positive with the blood, by induction, and would no longer attract the blood—which would, therefore, stop circulating.

Now for the proof:—All living beings, vegetable as well as animal, have the power of generating heat to some extent. Dr. Hunter found the temperature of trees always several degrees higher than that of the atmosphere, when the temperature of the air was below fifty-six degrees; and Lamarck, Hubert and St. Vincent observed the same in plants during their blossoming. All physiologists agree that the temperature of cold-blooded animals and reptiles, is, to a certain extent, dependent upon that of the medium in which they live, and may be depressed much lower than that of warm-blooded beings, without destroying life. Fish and insects may even be frozen hard, and afterwards brought to life by thawing. But men, and all the animals that have ganglia on their nerves, as stated by Sir Everard Home, are alone capable of maintaining a uniform temperature at all seasons, and in all climates to which they are otherwise adapted, provided, only, they are plentifully supplied with their accus-

tomed carbonized and hydrogenized food. Here, again, is exhibited, in the most striking manner, the great law of adaptation. Why should beings that have ganglia alone be able to preserve their temperature uniform, if it be not because they have a store of electricity deposited in these ganglia, to be called into action as exigency requires, instead of depending momentarily upon that inspired? But, as if to display His infinite wisdom, the Creator also made animals specially adapted to continue their existence, either with or without a constant supply of food, in warm or in cold climates. These are the hybernating animals—the marmot, the hedgehog, the viper or snake, etc. Jenner found the temperature of a hedgehog to be ninety-seven degrees in summer, when it was active; but only thirty degrees in winter, when it was torpid.

There yet remain a great number of facts, going to prove that animal heat is produced by combustion, and that electricity is the primary cause of this combustion, a few only of which can be here added. Animals whose temperature is the highest, bear privation of food the least, showing that the supply of food must be proportional to the temperature. Animals whose eyes are closed at birth, are subject to the changes of the temperature of the surrounding air, like cold-blooded animals; but, so soon as their eyes open, they acquire the uniform temperature of their parents. This seems to indicate that electricity enters through the eyes, as well as through the lungs. Dr. Currie found the temperature of a man, plunged into water at forty-four degrees, to be reduced from ninety-eight to eighty-seven degrees, in a minute and a half; while, in other cases, it fell even to eighty-three degrees. Now, the attraction of water for heat is so slow, that it may boil over a mass of ice; but its attraction and capacity for electricity has been shown to be very great. It is, therefore, probable that, in these cases, the temperature was reduced by the abstraction of electricity, the action of which, only, can produce heat. Dr. Currie had himself bled; and, during the operation, the mercury in the thermometer, held

in his hand, fell ten degrees; and, when he fainted, it subsided eight degrees lower still. Dr. Edwards' experiments show that, during summer, less oxygen is consumed and less carbonic acid expired, than in winter, and that the radiation of heat is proportionally diminished,—which proves that the evolution of heat depends upon the formation of carbonic acid (*i. e.*, upon combustion of carbon). Dr. W. Philip found that, if an electric current be passed through fresh-drawn arterial blood, its temperature rises three or four degrees, it assumes the character of venous blood, and partly coagulates; and Drs. Gordon and Fourcroy found that, if a thermometer was moved about in blood during the process of coagulation, the mercury rose six degrees in twenty minutes; and, in blood drawn during an attack of inflammatory fever, it rose twelve degrees. The former of these experiments shows that the combustion of carbon is continued by the electric current; and the latter, that electricity is thrown off during coagulation, particularly in inflammatory diseases, when the blood is surcharged with it, producing heat—which is always the case when electricity is set free in fluids. Lavosier and La Place placed animals in the calorimeter; and, by comparing the ice which they melted with the carbonic acid they expired, found that the amount of heat which they radiated was the same as if the carbonic acid had been formed by artificial combustion. Hence the only difference between calorification in the living system, and artificial combustion, is, that the former process is slower than the latter, and less intense. The experiments of Lagallois and Edwards show that there is a certain direct ratio between respiration and calorification. This seems to be contradicted by the lolling of animals in hot weather; but it should be remembered that, the slower the respiration, the more effectually the air is deprived of its oxygen and electricity. Hence the slow and deep respirations, during sound sleep, supply the system with a far greater quantity of these active agents of combustion, than the rapid breathing, in hot weather and during severe muscular exertion; and animals loll, not to get more oxygen, as

physiologists suppose, but to cool their lungs and blood, by bringing more air in contact with them to carry off the heat, without retaining it long enough for the oxygen and electricity to enter their arteries. Hence, also, the pathological cases adduced by Drs. Brodie, Graves and Stokes, in which the temperature of the body rose to an extraordinary height, while the number of respirations was greatly diminished, are not exceptional, as Dr. Dunglison regards them, but confirmatory of the theory of combustion. Nature knows nothing of exceptions to her laws; but always produces the same effects, under the same circumstances, and by the same agents; and any theory, that is full of exceptions and inexplicable cases, is sure to be wrong.

Some may, however, still urge that, in all the experiments of Chossat on the nerves, the blood seemed to be changed from venous to arterial, becoming scarlet in the lungs, and some carbonic acid continued to be expired, and oxygen separated from the air inspired, as usual, though the combustion of carbon evidently ceased. But Brodie's and Chossat's experiments are too indefinite to overthrow the theory of combustion, supported as it is by so many facts that cannot be refuted nor explained without admitting its truth. They did not ascertain whether the oxygen inspired was all combined with carbon during their experiments, as it is in normal respiration, or only a part, or none of it; nor whether the carbonic acid expired and oxygen inspired were proportional, and continued so during their experiments. They assume that the combustion continued during their experiments, and that the temperature fell and the animals died from cold notwithstanding; and, from this assumption, they infer that the theory of combustion is not true. But this inference is by no means adequately supported by the facts they furnish. All they ascertained was, "that the blood appeared to undergo its ordinary changes," which they inferred solely from the fact that the blood circulating in the arteries had the color of arterial blood, and that "oxygen is absorbed and carbonic acid exhaled at usual." But appearances are often deceptive;

and, in experiments so important, we have a right to demand something more definite than conclusions drawn from ocular appearances. We are not, however, destitute of explanatory facts going to show that their conclusion, that "the theory of combustion is completely subverted," is not warranted by their facts. Prof. Matteucci's experiments show that, when a clot of coagulated venous blood is cut into pieces, and the fresh surface exposed to oxygen, or even to atmospheric air (and in no place could it be more effectually exposed to the latter, than in the air-tubes of the lungs), its arterial color is renewed, without combustion. Their first fact, then, yields no support to their conclusion at all. Again, if an electric current be passed through fresh-drawn blood, containing free carbon, the combustion may be prolonged, as shown by Dr. Philip's experiment; and if it contain free electricity and carbon, the combustion of the carbon may be renewed by exposure to oxygen, as proved by Drs. Rogers' and Davy's experiments; and Sir A. Cooper's and Dr. Reid's experiments prove that, when the pneumogastric nerves are divided, the animal consumes less and less oxygen, and expires a progressively diminishing quantity of carbonic acid, in proportion as the difficulty of respiration increases, though it inspires more, instead of less air, than in normal breathing. Now, from all these experiments, it appears that the blood is so far subject to the influence of physical causes, that oxygen and electricity produce some changes upon it, even when it is withdrawn from its proper vessels, similar to those it undergoes in them. And—since all the branches of the sympathetic system of nerves are most intimately connected with each other, and also with the crura cerebri, with the medulla oblongata, and with the spinal marrow, and are so copiously distributed to the arteries, in which combustion and calorification take place,—it is not at all strange that a serious injury, done to any part of it, should produce a like serious effect upon every part. When respiration is seriously affected, carbonic acid accumulates in the blood, as shown by Dupuytren's experiments; and, since the inspiration of atmospheric air keeps

the lungs positive to the blood and carbonic acid, which are alike positive, the carbonic acid is still endosmosed into the air-tubes, so long as the blood contains it, and respiration, either natural or artificial, continues. Consequently, there will still be an exchange of oxygen and carbonic acid, to some extent, by the mere physical diffusion of these gases, —sufficient to authorize Drs. Chossat and Brodie to say, "that oxygen is absorbed and carbonic acid exhaled as usual," judging, as they did, merely from appearances,— though the combustion of carbon, which produces carbonic acid, may have nearly or entirely ceased. Hence, it appears that Brodie's and Chossat's second fact also fails to substantiate their conclusion, that their experiments entirely subvert the theory of calorification by combustion.

The attentive reader is now prepared to take another view of the nervous system. There are, as it were, two nervous systems,—one having its connections partly with the crura cerebri, partly with the medulla oblongata, and partly with the spinal marrow. This is entirely under the control of the mind, and, in its normal state, obeys the will whenever called upon, so far as motion is concerned. At the same time its fibrillæ serve as millions of the most vigilant sentinels, giving instant telegraphic intelligence to their commander (the mind) of danger or glad tidings approaching, from without or within; receiving his behests, and executing his commands with a readiness, precision, facility and celerity that an omniscient Creator only could plan and institute. This may be termed the systematic system of nerves. The other system acts entirely independent of the mind, the will having no control of it whatever, though it may be seriously affected through the medium of mental passions and emotions, which, acting independent of the will, withdraw electricity from it. This system has its immediate connection with a series of ganglia, situated principally in or under the great cavities of the body, one of which alone—the semilunar, according to Flouren's experiments—responds to artificial stimulation. This has been termed the "Sympathetic

or Organic system of Nerves," because, through its influence all the involuntary functions are performed. These two systems of nerves are everywhere connected with each other, generally forming ganglia at the points of intercommunication: and, from what has been already repeatedly stated, it appears that the systematic system is entirely dependent upon the sympathetic, as the source of its powers. This collects electricity from the arteries, into which it entered through the air-tubes of the lungs, after it has been set free from the blood by the contractite pressure (systole) of the heart, and delivers it to that system, whenever the latter becomes negative to the former in consequence of expenditure.

Hence it appears that the nervous system, including all its parts, has a particular series of primary functions to perform: First, that of collecting the agent (electricity) of motor and chemical power from atmospheric air, and of distributing this agent to the various organs of the body, which perform secondary functions immediately inservient to the maintainance of life, nutrition and growth. Second, That of supplying this agent of motive power to the organs that perform voluntary functions, i. e., to the brain for mental action; to the muscles for voluntary motion; and to the organs destined for the propagation of the species. The nerves—being merely collectors, distributors and propagators of power, or of its agent —electricity—are not adapted to produce any change upon any material received into the system, from extrinsic sources; and this is the best evidence that they produce none, even upon the electricity they receive primarily from the air; and that they do not, is positivily proven by the fact that the electricity thrown off by electric fishes is the same as that generated by the electrical machine and by the voltaic battery, in all respects, and yet it is certain that it is generated, or at least collected, by their nervous system. And, besides, there are also many cases on record of living persons having become so much surcharged with electricity as to give off sparks, involuntarily, and to receive an electric shock, when-

ever they approached a good conductor. All of these facts prove that the living system produces no change, whatever, upon electricity itself. But, the idea of adaption, has apparently never entered the mind of Physiologists, at least they never allude to it.

ARTICLE III. *Gun-Shot Wound—Axillary Artery severed—Excessive Hemorrhage—Gangrene of Arm—Recovery.* By HOMER O. HITCHCOCK, M. D., late House Physician to Bellevue Hospital, New York City.

On the evening of the 19th of last August I was summoned to meet Drs. Borroughs and Babcock, of Galesburg, in consultation over Edward Clemence, a young man of twenty-five, who had that day suffered a severe wound from a rifle ball. I learned that he had been out gunning with his friend. In crossing a stream Clemence reached his right arm out for his rifle, which was handed him by his fellow, and, taking it by the barrel, jerked it suddenly away. The hammer caught in the clothing of his friend, or in the grass, and the rifle was discharged, wounding the right arm at its upper part. Blood flowed very freely and *per saltum.* Clemence walked about a rod and fell down from faintness. His friend ran some eighty rods for men, who carried him to a house; blood flowing profusely all the while. His arm was now bound up so that external hemorrhage was mostly checked, and he was carried to his home, a distance of five miles, and immediately attended by Drs. Borroughs and Babcock. The accident happened about noon; he reached home about six o'clock. I saw him about nine o'clock.

I found he had not yet rallied from the shock of the accident—surface very pale, and covered with a cold prespiration—pulse very rapid and weak in the left arm, and no pulse at all perceptible in the right—temperature of right arm much below that of the left—no sensation at all below the insertion of the deltaid muscle—very little hemorrhage from

the wound—but the upper part of the arm and the shoulder throughout its whole contour was excessively swolen.

The ball had entered about the middle of the anterior boundary of the axilla by a small aparture. Its course was upward, inward, and backward. Glancing under and around the humerus, it seemed to have struck the head of that bone, and by it to have been directed to the back of the scapula, whose spine bent its course downward so that it lodged just over the lower angle of the scapula.

I introduced my finger into the aparture made by the ball, and found large clots of blood, easily broken down; but no pulsating artery could be felt, and very little hemorrhage followed its withdrawal.

There was no hesitation for a diagnosis—but what was to be done? Would not hemorrhage, and fatal hemorrhage, come on when full reaction had taken place? Several operations, and the probable chances they would give the patient, were considered—amputation at the shoulder joint—ligation of the subclavian—ligation of the axillary artery at its bleeding end—and lastly the operation of letting him alone;—and be it said, that a young surgeon, thirsting for the fame of a subclavian successfully tied—or a successful shoulder joint operation—in spite, moreover, of the outward pressure of friends, who wanted "to have *something done*," decided upon the "letting alone" process.

Ordered—perfect rest and the most careful watching—a little beef tea, and cold water dressings to the shoulder as reaction comes on—if hemorrhage occurs compress the artery over first rib.

Afternoon of 20th.—Reaction has fully taken place—patient has passed a much more comfortable night than any had expected. Surface warm and much less pale than yesterday—pulse in left arm one hundred, and of considerable force and volume—no pulse in right arm—but the temperature of this arm is normal—no more sensation than last evening—during the night slight hemorrhage once, but soon checked. Ordered same treatment continued.

On the 24th of August I visited him, having been telegraphed that his arm was mortifying. Since my last visit the patient has taken, by the order of Dr. Borroughs, morphine, p. r. n., and small doses of antim. et Potas. Tart. and also Potassæ Netratis, to control action of heart and arteries —diet spare, and water dressings to arm and shoulder until signs of gangrene—bowels moved by enemata.

I found the patient at this visit with a rapid and rather weak pulse—tongue coated—surface clammy—right arm enormously swolen, and of dark purple hue — about the wound, and for several inches below, the cuticle was raised in blebs, and there were other *too* sensible signs that gangrene had already commenced.

I laid the arm freely open, both before and behind, by incisions of several inches, relieving at once the tension, and allowing a free escape to the sainous pus and serum. I also cut down upon and removed the ball.

Ordered—that the whole arm and shoulder be covered with poultices of yeast and charcoal, frequently changed—diet, beef tea, beef essence—brandy—quinine, p. r. n.

On the 26th I found him much better—gangene had ceased to advance—wounds made on the 24th were freely discharging—pulse slower and fuller—appetite good, and improving. Ordered treatment continued.

From this time I did not see the patient until he came to my office on the 16th of November. His improvement, I am informed by Dr. Borroughs, was steady from my last visit, and he was discharged on the 12th of September. No notes were taken of the case after my last visit. I desire here to speak in praise of the watchful attention and good management of my friend Dr. Borroughs, in this case.

On the 16th of November, I learned the following facts :— When Mr. C. was discharged from the Doctor's care, he could move the fore-arm very little, if at all—could extend the arm upon the shoulder, perhaps five to ten degrees. There was very imperfect sensation below the insertion of the deltoid muscle. To-day sensation is nearly normal—so

that he can plainly feel a fly walk upon his arm nearly to his wrist. There is considerable sensation along the palmar side of the thumb—but very little along its dorsal surface. Sensation also considerable along both dorsal and palmar surfaces of fingers, except the little finger and the external half of ring finger.

He tells me that most of the time the injured arm is warmer than the other, but is chilled much quicker. To-day the patient having ridden in an open wagon from Galesburg to my office, the injured arm is much chilled—the fore-arm and hand look quite purple. Pulse, however, is distinct, though weak, in both radial and ulnar arteries.

Motion is slowly returning. He can now extend the arm upon the shoulder to nearly sixty degrees. The fore-arm naturally rests at a right-angle with the arm, but he can move his hand through an arc of more than forty-five degrees. There is, as yet, no motion whatever of his hand upon the wrist, nor of his fingers upon the hand.

MORAL.—"Learn to labor *and to wait.*"

KALAMAZOO, Dec. 10th, 1857.

ARTICLE IV. *Two Cases.* By WM. LEWITT, M. D.

CASE I.—*Puncture of the Bladder through the Rectrum.*—The patient was a man something over sixty years of age. He had occasionally been troubled with a retention of urine, but not to any great degree until this attack, which was brought on by riding on horseback.

He called upon a *medical man* to relieve him, by the introduction of a catheter, who,—having but *one*, and that a very *poor one*, *broken near the eye*—to facilitate the introduction, *cut the end off transversely*, *and tried to introduce it in this condition.* Failing in that, he *cut it off obliquely*, *thrust it into the bladder*, (*hard practice!*) and relieved him for the time, *lacerating the urethra its whole length terribly.*

The next day a physician was called upon to relieve him,

but finding himself foiled in the attempt, called in a neighboring physician in consultation, who also failed.

I was then called in consultation with the two; and it being then over fifty hours since any urine was evacuated, the patient was becoming comatose. The bladder was very full, extending nearly as high as the scrobiculus cordis. Upon attempting the introduction of the catheter, I found considerable spasmodic stricture at several points along the urethra, which was overcome by putting the patient under the influence of chloroform. I found, however, a complete occlusion of the prostatic portion of the urethra, preventing the introduction of any kind of catheter into the bladder.

Shreds of the mucous membrane of the urethra, from the laceration caused by the miserable instrument used by the first *attendant*, came away in the eye of my catheter.

By an examination per rectum, I found the prostate very much enlarged and inflamed, principally, I have no doubt, from the same cause as the laceration.

The only alternative then, was puncture of the bladder, which I resorted to, through the rectum. As the prostate was much enlarged, I introduced the finger into the rectum, and drew down the gland as much as possible to avoid wounding it. I then introduced a long curved trocar and canula, punctured the bladder, and evacuated the urine, to the immediate relief to the distended viscus. The canula was left in the rectum twenty-four hours, and retained there by a T bandage.

The patient was then treated to subdue the inflammation of the urethra and prostate, with infusion of buchu and uva ursi. He rapidly improved under this treatment, and in a few days was able to pass the urine per viam naturalem, and soon able to go about his business.

CASE II.—*Hydatids of the Uterus, with suppression of Urine, followed by profuse Utrine Hemorrhage.*—Mrs. F., aged forty-eight years, called upon me to relieve her of occasional attacks of vomiting and constipation, for which I suc-

cessfully prescribed equal parts of tinct. Rhei and tinct. Gentian. About a week afterwards I was called upon to visit her, and found her laboring under almost complete suppression of urine, not voiding more than two or three ounces in the twenty-four hours, and this very thick, dark colored, and offensive. The catamenia had been regular up to three months before this time. She had given birth to a child about two years previous. Upon examining the abdomen, I found it somewhat enlarged, and had the impression that the enlargement was owing to pregnancy, but thought it might possibly be the bladder distended with urine. On introducing the catheter no urine made its escape, which fact fully convinced me the enlargement was uterine. I prescribed some mild diuretics, but without any effect upon the secretion.

About two weeks afterwards I was sent for in great haste in the night. I found her much prostrated, with small, frequent pulse; she had suffered from considerable uterine pain and profuse hemorrhage during the fore part of the night, but both had quite subsided before I arrived; the abdomen had increased in size very much since I first saw her, and was as large as it would be at seven months utero gestation; the suppression of urine still continued.

On making an examination per vagiam, I found the os uteri firm and rigid, not admitting the point of the index finger, and feeling like a cartilaginous ring. I gave her small doses of morphine and acet. plumbi, after which she remained quite comfortable, without hemorrhage or pain, until three o'clock in the afternoon, when profuse hemorrhage returned, without the slightest uterine effort, the os still remaining quite rigid. I made cold applications, ice in the vagina, gave ergot, and several other hæmostatics, but all without effect. I then passed a flexible metalic catheter into the uterus, for the purpose of rupturing the membranes, but to my great surprise, it met with no resistance after passing the os uteri. I could feel the end of it directly through the abdominal walls. On withdrawing the catheter I discovered a few

transparent visicles in the eye of it, and in a few minutes afterwards about half a wine glass full of them were expelled, which at once convinced me the nature of the case.

I called in counsel; but all efforts to suppress the hemorrhage were in vain; no more hydatids were expelled, and she died about seven o'clock that evening. No autopsy was allowed.

There is a curious physiological and pathological question here, concerning the suppression of urine and rapid growth of the hydatids. The kidneys, no doubt, performed a part of their functions, in separating the more solid excrementitious matter from the blood, while the aqueous portion in place of being elminated by the kidneys, was appropriated for the rapid growth of the hydatids. I have no doubt that the uterus was filled with them. In no other way can I account for the great suppression of the fluid portion of the urine, and rapid increase of the vesicles or hydatids,

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Bibliographical Record.

Transactions of the American Medical Association at its Tenth Annual Meeting, held at Nashville, May, 1857.

We received the transactions, at date, too late even for a brief notice in our December issue; and the multiplicity of our engagements renders it impossible to do more than barely notice it at this time. Some of its reports and essays, shall, however, receive more extended attention hereafter. We have heard not a few invidious comparisons of the present with previous volumes; and we have not unfrequently heard the question asked: What has the Association accomplished! Has it fulfilled the purposes for which it was originated?

We very much doubt, whether any very definite purposes were ever conceived in reference to its organization. It is true that reform in Medical Education was a somewhat conspicuous subject;

but like many other subjects which would naturally be affected by the Association, it has never had definite action. Committees have reported, reports have been published—and medical schools have gone on apparently uninfluenced by either the report or its wide publication. But this want of influence has been merely apparent. At no previous time in the history of Medicine in this country, has there been so much thought, conversation, and writing, on the subject of Medical Education, as during the last two years; and whoever will take the pains, can trace this result to reports and debates in the Association. The seed has been sown, and we confidently look for an abundant harvest.

But the great good which the National Association is accomplishing, consists in bringing together the Profession from widely different sections, breaking down prejudices, and forming ties, which, increasing in number and strength from year to year, will gradually bind the profession together, and give a force to its legislation, which at present is comparatively unfelt and unacknowledged, but which, nevertheless, is exerting a wide spread influence. This feature underlies and gives vitality to every other consideration. Let then, the social character which has ever attended its meetings be preserved; and while we neglect not the "weightier matters of the law," let us take care to knit closely and extensively social ties. We have unbounded faith in the Association; but we look for general influences, rather than special results. The latter must follow; and its connection with the former will not always be seen. G.

Proceedings of the American Pharmaceutical Association, at the Sixth Annual Meeting, held in Philadelphia, September, 1857.

We are pleased to see such marked evidence of vitality, as is exhibited in the volume whose title we have recorded above. Truly, practitioners of medicine are much indebted to a body of men, who will give their whole energies to the improvement of pharmacy; and whosoever will take the trouble to compare the present state of the science, with its condition twenty years agone, will acknowledge this indebtedness with a hearty good will.

The proceedings comprise a volume of one hundred and seventy-eight pages, in which we find many truly able reports and communications. Among them, we notice a paper, "Upon improvements in

methods of rendering medicinal preparations pleasing to the eye and to the taste, and agreeable to use," by Frederick Stearns, of this city. This paper was deemed of sufficient interest, by the Executive Committee, "to warrant its being more generally circulated than the voluminous character of the Proceedings" would allow; and an additional edition was ordered struck off, for more general circulation. We notice, also, another paper by Mr. Stearns, on the "Production of Leeches in Michigan," which will be found entire in the "Spirit of the Medical Press" of this number of the *Independent.*

To the report "On the Sale of Poisons," is appended "An Appeal to Druggists and Pharmaceutists in the United States in regard to the sale of Poisons," which, if generally heeded by dispensers of medicines, would tend greatly to curtail both intentional and accidental poisoning.

The reprint on "Unofficinal Formulæ" will be interesting to that class of physicians who are continually seeking *new* prescriptions, and whose faith in *curative* remedies has never been shaken by observation of nature's operations.

The Association has laid out much work for another year; and we look forward to its future reports with greatly interested expectation. G.

Spirit of the Medical Press.

Removal of a Foreign Body from Beneath the Heart. By E. S. Cooper, M. D., of San Francisco.—The operation I am about to describe has been the subject of such a variety of comments, and so differently represented by the public prints, as well as by parties who were not present, and consequently knew nothing of its real merits, that in giving a true description of the case it appears due to myself to mention this fact, and also to refer to those present at the operation, for confirmation of my report. No one who knew anything of Beal's condition at the time, hesitated to say that he must die without an operation. He expected to die under the knife, and gave directions about his burial before the operation began. His friends expected him to die, and were assured that such would probably be the case; but all wished him to embrace the only remaining chance of prolonging life; and guided by a brave spirit, he most cheerfully took all risks, and fortune rewarded his courage.

It has been known from immemorial time that wounds penetrating the cavity of the chest are not necessarily fatal. This knowledge suggested operations upon the thorax in the very infancy of surgery. Accordingly we find that exsection of the ribs was practised by Galen in his native village, Pergamus, Asia Minor, while he was still a very young man, as early as the first half of the second century, and by numberless other surgeons up to our own time. (*Mercure de France, April* 1758. Suif excised two ribs of a man named Botaque, in such a manner as to be able to introduce the fist into the chest. (*Velpeau's Operative Surgery.*) Even the native Fiji Islanders frequently cut through the intercostal spaces by means of a splinter of shell, and extract barbed arrows from the inside of the chest. (*Williams' Tonga Islands.*)

The operation of Richerand, where a most extensive section was made, is well known. Since 1818, the ribs have twice been exsected successfully, by Cittadini, by Percy, for caries of two ribs, resulting from gun-shot wounds, by M. Blandin, at Beaujon, by Roux, at la Charite, and by Mott, of New York.

But the case of Richerand is the only one that bears any resemblance to the one I am about to report. In Richerand's case "it became necessary to remove the middle portion of four ribs, to the extent of several inches. The pleura, which was greatly thickened, had also to be removed, so that the pulsations of the heart were exposed naked to the sight." This operation was for cancer, and the patient died at the expiration of a few months, from regeneration of the disease. (*Velpeau loc. cit.*)

Wounds of the heart itself are well known not to be necessarily fatal. Dissections have revealed cicatrices on the heart, when the subject had died from an entirely different cause, long after the wound had been received. Cases might be cited with names and dates if they were not well known to the learned.

But the demand for surgical interference in cases of foreign bodies in the chest, depends upon the violence of the attendant symptoms, and upon the nature of the foreign body itself. Lead, for instance, will generally become encysted and cause comparatively little inconvenience after it once stops, while a small bit of iron will produce suppuration and is liable to keep changing its location, and may therefore produce violent symptoms after months or even years.

Case.—Mr. B. T. Beal, *æt.* twenty-five, of Springfield, Tuolumne County, California, with some other young men, in a frolicsome mood, resolved to burst an old gun, and accordingly loaded it with eighteen inches of powder, to which they connected a slow match and then endeavored to seek security by flight. Unfortunately a brisk wind blew up the powder with great rapidity and the gun exploded before they had retreated far. A slug of iron had been driven into the gun as a temporary breech pin,

which bursting out in the explosion struck Mr. Beal in the left side below the armpit, fracturing the sixth rib, entering the chest and lodging, as was afterwards found, beneath the heart, upon the vertebral column, just to the right of the descending aorta, where it had evidently remained from the period of the injury, January 26th, 1857, until it was removed, April 9th, seventy-four days after. In a state of extreme prostration he was brought to the city, having had frequent discharges of several ounces of purulent matter at a time from the chest through the original wound. The left lung had lost its function, probably less on account of the violence done the lung at the time, than from the subsequent accumulation of pus in the chest, though he had bloody expectoration for a few days. He came to my Infirmary, on Mission Street, 8th of April, and during the night following had alarming symptoms of suffocation, so much so that I entertained most serious apprehensions that he would not live till morning. So urgent had his symptoms become, that after his arrival he was constantly in absolute danger of dying from suffocation, so that no time was to be lost, even for him to obtain rest from the fatigues of his journey. Under the greatest disadvantages, therefore, the operation had to be performed; otherwise he must be abandoned to his fate, which a surgeon feels but little inclined to do, in case of such a brave patient, who is willing to endure any operation, however painful or hazardous, to save life.

Operation.—The patient being placed on the right side, an incision through the soft parts three inches long was made; commencing opposite the seventh true rib and following the track of the original wound, was carried over the fifth and sixth ribs, which were drawn close to each other by contractions, consequent upon the injury. The sixth true rib was found fractured and slightly carious. A transverse incision three inches long, was now made, beginning at the centre of the first when the soft parts were reflected so as to expose the ribs. Torsion was applied to one intercostal and two or three small arteries which bled rather freely. The wound was now fully absterged, after which an effort was made to find the breech-pin by using the probe. This failing, the incisions were lengthened and the ribs further exposed. A portion of the sixth rib, which was carious, was now removed, and was followed by the discharge of about ten ounces of venous blood, contained in a cyst which was broken by the removal of the portion of the rib. A most extensive but careful examination with the probe was now made, in order to detect, if possible, the foreign body, yet to no purpose; but air having already been admitted into the chest, I unhesitatingly removed portions of the fifth and seventh ribs, together with such an additional piece of the sixth as was necessary to make ample room to afford every facility for the further prosecution of the search. Some very firm adventitious attachments were now broken up with the fingers, which gave exit to an immense amount of purulent

matter—two quarts at least—which had been entirely disconnected with the fluid first discharged from the chest. The pleura had several large holes through it, and was thickened to four or six times its natural state in some parts. The pulsations of the heart in the pericardium could be distinctly seen through these holes. Brandy was now administered to the patient, who appeared to be rapidly sinking. The left lung was found completely collapsed after the discharge of purulent matter. By giving brandy freely, the patient soon began to revive, when the search for the foreign body was resumed. At this time the fingers could be placed upon different parts of the heart and feel its pulsations distinctly, but could obtain no clue to the location of the foreign body. The patient now appeared almost completely exhausted. Brandy was given freely. Chloroform was not administered at first, owing to the expected collapse of the left lung on the admission of air into the chest, but a considerable reaction taking place, a limited quantity was now used and the manipulations continued. A sound was introduced and the theoracic cavity explored for at least three-quarters of an hour before anything like a metallic touch could be recognized, and then it was so indistinct as to leave the matter doubtful.

The space immediately above the diaphragm was considered the region in which the metal was most likely to be found; since the immense amount of suppuration which had taken place, it was thought might have dislodged, and gravitation carried it down to the bottom of the chest. The metal not being found here there was no longer any probable opinion to be formed as to its whereabouts, and to describe the difficulties of the search that followed would be difficult if not impossible. No one can have any just conception of the degree of patience required to do what was done, save the one who did it. This is not spoken boastingly, but is simply the truth. It is sufficient to say that a general exploration of that side of the chest was made, and then it was taken by sections, occasionally passing through holes in the pleura, which latter appeared to have scarcely no normal relations to the surrounding structures, touching by lines the entire surface of the parts, and at last the sound appeared to encounter something of a metalic nature, beneath the heart, but the pulsations of that organ were so strong against the instrument as to render it difficult to settle the matter definitely. At last, however, it became evident that the location of the iron was found, and I endeavored to move it out of its position with the point of the sound, in order to get it into a place more eligible for extraction by the forceps. I failed in this, and in maneuvering, the instrument finally lost the track by which the sound had first passed back of the heart to the metal, and it was during my efforts to recover this, and which was accomplished with the more difficulty owing to some membranes falling in the way, that I discovered the sound had in the first instance reached the metal by passing between the descending

aorta and the apex of the heart. The metal being again found, the sound was steadily and strongly held in contact with it until a pair of long lithotomy forceps was thereby conducted to the spot and the breech-pin seized and extracted, which, however, was the work of several minutes, owing to the great difficuly in grasping it even after the forceps was made to touch it. The forceps, however, being heavier, the motion of the heart was not so embarrassing to its manipulations as it had been to that of the sound, but owing to its size it could not follow the sound and be expanded sufficiently to seize the metal without lifting the apex of the heart considerably out of its natural position. After the metal was extracted, the patient was turned on the wounded side, and a tent placed on the track of the original sinus, after which the wound was dressed and the sufferer permitted to rest in bed with his body still inclined towards the injured side.

April 10—Greatly prostrate: slight pain in the left breast; no motion of that lung; gave morphine.

April 11th—Same as yesterday.

April 12th—Slight cough; gave enema and light nourishment.

April 13th—Evacuations from bowels; slight discharge from the wound, being the first since the operation.

April 14th—Improving; considerable appetite.

April 15th do do do

April 16th do do do

April 17th do do do

Apirl 18th do do do

April 19th—Considerable cough.

April 20th—Severe cough to-day, and pain in the right side, as also in that of the wound, though not so great as in the other.

Skin dry; no expectoration; urine scanty, and highly colored. These symptoms were very alarming, the more so from the fact of their implicating the hitherto sound lung.

The pneumonic symptoms continued without abatement for several days, and finally subsided, but left the patient greatly prostrate. On the 26th purulent expectoration began and continued to increase for about a week, when nearly a pint was discharged in the space of twenty-four hours, and during this time but little escaped from the wound. After this period, for nearly two weeks, the discharge was greater or less from the wound, in proportion to the amount of purulent matter expectorated, and vice versa. The matter from both places being of the same quality, and occasionally tinged with blood.

At the end of two weeks from the time the communication between the trachea and the original suppurating surface appeared to have been established, the purulent expectoration began gradually to subside, and the patient's condition slowly to improve until the end of seven weeks

after the operation, when he left the city. There was no perceptible motion of the left lung at this time. He was considerably fatigued by his journey from the city to the country, and appeared worse for several days in consequence, but eventually began to improve rapidly, and continued to do so until three weeks since, at which time, as is well known, he visited this city, and was so improved as not to be recognized by medical men present at the operation, who had seen him every day for some weeks after.

Aug. 1—*Present condition*—The external wound has entirely cicatrized. No cough nor pain in the left side—good appetite and all the functions of the system well performed.

The left breast is somewhat sunken, but the upper lobe of that lung has recovered to a great degree its former action.

The operation was performed in presence of the following medical men, some of whom assisted:—

Dr. I. Rowell, Censor of San Francisco Medical Society.
" Wm. Carman, Secretary San Francisco Medical Society.
" B. A. Sheldon, Vice President San Francisco Medical Society.
" L. Grover, Member San Franisco Medical Society.
" J. M. Williamson, Censor of State Medical Society.
" Wm. Fifer, Member State Medical Society.
" R. Beverly Cole, Pres. S. F. County Medico Chirurgical Association.
" P. J. Reilly, Secretary do do do do do
" L. Hubbard, Ex-Pres. do do do do do
" Wm. Hewer, Censor do do do do do
" J. W. Tewksbury, do do do do do do
" F. P. Wierzbicki, do do do do do do
" J. Lee Webster, do do do do do do
" J. P. Macaulay, late Surgeon San Francisco City Hospital.
" B. F Hardy, late of Honolulu, S. I.
" J. S. Calef, Member San Francisco Medical Society, and others.

Remarks.—The carious condition of the sixth rib was probably a fortunate circumstance in this case, since it favored the formation and continuation of a sinuous opening, through which purulent matter was discharged from time to time, prior to the operation, and which limited, to some extent, the immense accumulation that, as it was, had nearly terminated the patient's life previous to that period.

His subsequent astonishing recovery is attributed to his great cheerfulness, good constitution, and to the effects of our unparalleled climate, in which it appears nearly impossible for a patient to die with almost any ordinary degree of injury, provided a reasonable share of attention is afterwards given him. San Francisco has the advantage of every other city on

the globe, in regard to climate, for surgical operations, since, if owing to any peculiarity of the case, our coast breezes are not equally well adapted to all the stages of convalescence after an operation, it is an easy matter to obtain almost any desirable change by half a day's easy travel, which I think can be said of no other city.

In Mr. Beal's case, while nothing could have been better than our cool, bracing atmosphere, for the first few weeks after the operation, still, having recovered from the immediate effects of that, the subsequent lung symptoms were much better controlled by a removal to the Santa Clara Valley, thirty miles distant, than they could possibly have been by medicine, conjoined with the greatest care that could have been bestowed upon him in this city.—*Transactions San Francisco Med. Chi. Association.*

The Production of Leeches in Michigan.—The great cost of imported leeches, and their liability to accident and disease, have proved a serious drawback to their general use in this country, more especially in interior towns and cities, where the delay incident to the transportation is another objection to the purchase and sale of them by the pharmaceutist.

I believe that large dealers in leeches in the country confine themselves solely to the importation of those of foreign collection, and that our indigenous varieties, some of them valuable, are entirely neglected.

I desire to call the attention of the Association to the fact, one proved by an experience of twenty years, that by means and appliances so simple as to commend them to pharmaceutists in every part of the Union, we may insure to ourselves an abundant and cheap supply of these invaluable animals.

The foreign varieties of leeches can be easily naturalized, and the supplies of those *indigenous varieties* found valuable, can be indefinitely increased.

The idea of growing leeches in the State of Michigan was first carried out by a member of the medical profession, who moved there from New York city some twenty years ago, while that portion of his adopted State was yet a wilderness. Feeling the want of leeches, which he had freely used in his eastern practice, he was led to experiment with those found in the neighboring marshes, with indifferent results. He finally procured, in New York, a lot of Spanish leeches, and, building a tank for them, had the satisfaction of seeing them thrive admirably, and to this day has produced them in large quantities, sufficient to supply the practitioners of his portion of the State. The "Hirudo decora," a leech found abundantly in some parts of Pennsylvania, was in this way introduced, and is now largely used in some counties of the State.

The "aquaria" required consists of a wooden tank eight feet long, six

feet wide and four feet deep; this is set into the ground near a running stream of water, a portion of which is conducted into and through the tank, its entrance and exit being made through wire cloth to prevent the escape of leeches. The bottom of the tank, to the depth of eighteen inches, is covered with cobble stones, in order to afford a refuge for the leeches. The water exit is placed about ten inches below the top edge of the tank, which edge has a rim of boards, projecting inward, all the way round nailed to it. This is all the apparatus required, and they need but very little attention. A few frogs thrown in once a week will supply five thousand of them with food sufficient. In winter they become torpid, and so remain till spring.

They produce their eggs during the months of June and July, and the leech is matured in about two years. Their age, when subject to ordinary care, is about fifteen years.

When applied they bite readily, and draw about two drachms of blood, the flow of which, however, is to be excited in the usual ways.

Those parts to which leeches are to be applied should be well cleansed from smell or perspiration, and they are best used by putting the requisite number into a suitable sized cupping glass partly filled with water, and applying the edges of the cup closely to the part to be leeched; after they have taken hold, the cup may then be gently removed.

The naturalized leech is hardy, rather small (from one and a half to two inches long), and very active; those produced from the variety brought from Pennsylvania (a specimen of which is herewith submitted) are of a velvety olive green color upon the dorsal surface, with three longitudinal rows of spots; the centre one orange colored, the others black; the belly is of a rusty orange spotted with black.

The grey leech of Michigan, the best of those indigenous to the State, is of a uniform grey color, extremely thin or flat, peculiar in its motions, is with difficulty induced to draw, though its bite is unaccompanied with any pain; the eggs of the leech, instead of being left to themselves, as in the case of the other leeches, are attached to the belly, as are the young leeches for some time after their development.

The low price at which these leeches can be produced renders their aid available to the poorest; and while by cheapening them, they are, by increased demand, rendered a greater source of pecuniary profit, they will cost the producer nothing but a little time and patience.—*Transactions Am. Pharmaceutical Association.*

New Views on the Physiology of the Large Intestine. By M. F. Colby, M. A., M. D., etc., *Stanstead, C. E.*—It is now more than eighteen months since I discovered the error in the received physiology of the function of

the large intestine, particularly in that part of it called descending colon, sigmoid flexure and rectum. Every day's observation since has confirmed me in the correctness of my views. Although I have not been able to engage in general practice, I have had numerous opportunities of testing them as to their bearing on pathology. The knowledge of the true function of the descending bowel does away with all the uncertainty complained of by medical men as to the effect of cathartics, and more particularly of enemas, in many cases. A discussion took place in the Westminster Medical Society in 1833, which is reported in the London Lancet. The discussion developed one fact, that there was a consciousness among all present that there was something not satisfactory in the received physiology; which led off the question to the anatomists present, whether there was anything in the anatomical structure of the descending bowel which could operate as a valve?

I can demonstrate the received physiology of the function of the descending bowel to be untenable, and that it implies the charge that the Creator has left a defect in the organization of a particular part, which renders it inadequate to the performance of the function assigned it. My new physiological doctrine recognizes two distinct apparatuses, each possessing peculiar and distinct functions over and above what is recognized by the old system. These functions were supposed to pertain to that apparatus called the large intestine, and heretofore assigned to the function of organic life, assisted by the voluntary co-operation of the abdominal muscles.

As to the purport of my new physiological doctrine, I quote from lectures which I am preparing illustrative of the subject, the following recapitulation:—

1st. I assume that the organic function of the colon ceases at its left transverse extremity.

2d. That the portion called descending colon and sigmoid flexure has a separate and independent function.

3d. That this portion of the bowels is anatomically inadaquate to the performance of the function heretofore assigned it.

4th. That this portion constitutes the link between the animal and the organic life. That it is possessed of both animal sensibility and contractility to such an extent as to entitle its functions to be considered those of animal life.

5th. That although it is to a certain extent subject to the will, and can be brought into action at any moment by it, yet it has an independent instinctive life which gives it an influence and a power which neither its organic or animal life could give it.

6th. I assume the name of *curator* as proper to express its functions; and as it is a dualite acting under its instinctive life, at times in a separate

capacity, I give the name of *curator superior* to that portion above the superior spinous process of the ileum, and which for the time is devoted to the functions of organic life; and *curator inferior* to the portion below usually called sigmoid flexure—this for the time being devoted to the functions of animal life.

7th. That the *curator*, when acting as a unit, occupies the post of observation between the two lives. That it takes cognizance of the time when the digestion and the nutritive absorption is completed in the small intestine; that it then opens the ileocolic valve, and at the same time by a suctive and expansive action it takes the fæcal matter from the transverse colon and conveys it to the rectum, which it aids the levator ani muscles to raise, and by a divergent action of its two longitudinal muscles it opens to receive the same. The *curator* by its instinctive power, recognizes the fitness of the rectum to receive and expel the fæcal matter simultaneous to the opening of the ileo-colic valve; it also at the same time brings into action the abdominal muscles, by which the contents of the small intestine are pressed forward to supply the place of the refuse matter removed from the colon. Its office is therefore not only prehensible in taking the fæcal matter from the tranverse colon and conveying it to the rectum, but it exercises the conservative function of keeping the ileocolic valve closed till such a time as the absorption of all nutritive matter from the contents of the small intestine renders its closure no longer necessary.

8th. That the rectum is part of an aparatus which I call rectal, and which is wholly under the domain of the will; that it exercises the function of defæcation, and aids in that of urination and parturition. In its anatomical structure it is analogous to that of the upper part of the digestive tube, with the difference of the reversion of the sphincters. It consists of the strongest muscular portion of the bowel; the rectum, with its muscles; the two sphincter, the levator ani, the coccygei, etc. The same looseness of the cellular tissue, which connects the muscular coat of the œsophagus, is found between these coats of the rectum.

9th. That the power of the will extends over that part of the digestive tube which extends from the mouth to within two or three inches of the cardiac orifice of the stomach; so also the power of the will extends from the external sphincter ani to within two or three inches of the left transverse extremity of the colon.

10th. That the rectum in that abnormal state which results from phlogosis of its muscular coat, has its contractility exalted so as to cause it to act antagonistically to the *curator*. This is the most frequent cause of constipation and its consequence. When this contractility becomes spasmodic this resistance leaves the *curator* to the mechanical forces—hence results accumulations and detention of its weakened side walls. It

is this abnormal state of the most sensitive part of the digestive tube which fills hospitals with lunatics. It is also in this state that the *curator*, by its instinctive life, acts as a dualite by a peculiar transposition which gives it a great power in overcoming the resistance of the rectum.

11th. The ileo-colic valve may have its functions suspended by local disease, as well as by peritoneal inflammation; but the most frequent cause is the suspension of the function of the *curator*, which may arise from antagonism from the abnormal state of the rectum, or from a phlogosed state of its own mucous membrane. A sudden closure of the valve would cause tympanitis, ileus or strangulated hernia. A weakened or too active state of the valve would result in emaciation from the premature passing of the nutritive matter.—*Montreal Med. Chron.—South. Jour.*

Interesting Case of Transfusion.—This operation, says an English paper, has been successfully performed by Mr. Wheatcroft, surgeon, of Cannock, on the person of a woman named Wood, residing there. Immediately after her accouchment, fearful hemorrhage set in, draining the woman of blood. She felt herself dying, and summoned her husband to her bedside, bid him "good-bye," and earnestly requested him to take care of the children when she was no more. She then became pulseless and gasping, occasional breathing being the only indication of life. A vein was opened in her arm, and one in the arm of her husband, and as the blood flowed from the latter it was transmitted by suitable apparatus into the veins of the wife. After seventeen ounces had been thus injected, the pulse became perceptible, the colorless lips reddened, the glassy eye brightened, and she thankfully said, "I am better." The case has progressed very favorably, and the woman is recovering. Death was here robbed of his victim. We quote the above from the Western Lancet. The success in the case of Mrs. Wood should lead to renewal of this interesting and valuable method of keeping alive the vital spark.

A Substitute for Transfusion.—Some years ago, our colleague, Dr. Linton, suggested the propriety of applying bandages to the lower extremities in case of extreme hemorrhage. By this means the blood from the extremities is forced into the large vessels of the trunk, and may thus be made to supply the life-giving fluid to the vital parts until other remedies can be brought to bear. A successful case was reported at the time, in which this plan was resorted to, but the suggestion was never acted on that we have heard of, save in one instance, in which it was resorted to by ourselves with marked benefit. It is manifest that by this means several ounces of blood may be economized. We are led to these remarks by the foregoing case of transfusion.—*St. Louis Medical and Surgical Journal.*

Use of Chloroform in Retention of Urine.—An intemperate cabman, aged fifty-two, was admitted into a medical ward at Guy's a few days ago on account of chest symptoms. It appeared that he had had gonorrhœa twelve years before, and had ever since had more or less difficulty in passing his water. After having been in the hospital nearly three weeks, he was seized with retention of urine. The dresser and house surgeon made patient and repeated attempts to pass a catheter, but without success. There was little doubt that the stricture was a permanent one, which had been closed by inflammation. In February the retention had become complete for two days; the symptoms were becoming very urgent, and Mr. Cooper Forster was accordingly called to see him. Opium had been most freely given. Having failed in persevering attempts to introduce a No. 2 catheter, Mr. Forster determined to administer chloroform, and, if needful, to puncture the bladder by the rectum. When completely insensible, another trial was made with a No. 3, which now passed most readily. We cite this case as important, because it proves beyond dispute the influence of the anæsthetic state in relaxing an otherwise impermeable stricture. An opiate treatment had been fairly tried before, and had failed, and the catheter had also been found useless in the hands of several well practiced surgeons. The plan of administering chloroform in cases of obstinate stricture and retention, is one in wide use, both in hospital and private practice; but as it is not yet in such general favor as it deserves to be, we have thought that so pointed an example of its advantages might be worth bringing before our readers.—*Med. Times and Gaz.*

Post-mortem Examination of the late Dr. Marshall Hall.—A stricture of the œsophagus was found opposite the eighth ring of the trachea. The tube was but moderately thickened, but the membrane was folded in so as to form a valve, almost closing the passage. There was ulceration and congestion of the œsophagus above, and the pharynx to the extent of nearly three inches.—*St. Louis Medical and Surgical Journal.*

Treatment of Sore Nipples.—A friend, says the Boston Medical and Surgical Journal, whose judgment and experience entitle his opinion to much consideration, assures us that equal parts (by weight,) of glycerine and tannin is the best application for sore nipples which he has used. It is also an excellent remedy for chaps and excoriations of other parts. The tannin dissolves readily in the glycerine. We hope this formula will be as widely known as the celebrated tincture of benzoin cure, which has, we believe, been quoted in every medical journal in this country.—*St. Louis Medical and Surgical Journal.*

Yellow Jessamine. (*Gelseminum Sempervirens.*)—"A planter of Mississippi, while laboring under a severe attack of bilious fever, which had not yielded to the remedies used, sent a servant into his garden to procure a root, and prepare an infusion of it for him to drink. The servant, by mistake, collected the root of the Yellow Jessamine, made an infusion of it, and gave it to his master to drink. Soon after swallowing some of it, the planter lost his muscular power, so as to be unable to move a limb or to raise his eyelids; while he could hear and feel, and exercise his usual faculties as in health. His friends became much alarmed at his great prostration; but after some hours he recovered his muscular powers, and was highly pleased to find himself free from fever. He soon learned from his servant what plant it was from which he obtained the roots; and trying its effects upon the people of his own plantation, and those of his neighbors, he ascertained that he had a valuable remedy for fevers. Thus was a new remedy introduced to the world by pure accident."

In fever it is extensively used by the Thompsonians, and is the active ingredient in several quack medicines, as the "Electrical Febrifuge," "Speed's Fever Tonic," "Mississippi River Tonic," etc.; by many physicians experienced in its use, it is considered little inferior to quinine.

While various virtues are ascribed to it by many, all are agreed upon its sedative and narcotic properties. As a sedative, it is deemed superior to either digitalis or veratrum veride, and although not so powerful as the latter, it is yet more safe and manageable, and often times more applicable from the fact that it neither causes nausea, nor acts on the bowels. It acts chiefly upon the sensory ganglia, spinal chord, and voluntary muscles, leaving entirely unaffected the intellectual faculties. It reduces the circulation and frequency of the respirations, promotes perspiration and the secretions generally, and while it relaxes wonderfully all the muscles, it relieves by its action on the nerves of the general system all sense of pain. "Under its influence restlessness is soon succeeded by calm repose, and the excited, frequent pulse, tempers down to tranquility. These favorable impressions must be secured however, by a frequent repetition of the dose, as its effects are not very durable, wearing off in two or three hours." From a full dose, intoxication, langour, dizziness, double vision, and inability to raise the eyelids, result; from an overdose, complete muscular prostration and death.

Dr. J. A. Mayes to whom these extracts are due, says, "I esteem it a most valuable adjuvant to other treatment, in all cases where high arterial action exists, in which it is desirable to lessen the frequency of the pulse, and to calm excitement, and where, as in the case of injuries, it is desirable to lessen the irritability of the nervous system; also in that troublesome hysterical exaltation of the nervous sensibilities, so often met with in enervated females, its value cannot be too highly estimated. In short

it is a specific for no particular disease, but an admirable adjuvant in the treatment of nearly all, bringing about in the system a state of repose favorable for obtaining the full action of other and more radical treatment."

The root contains a dangerous resinoid principle, readily soluble in strong alcohol, but not in dilute liquor or water, while the sedative properties are fully so.

Dr. Mayes recommends the following formula: "Four ounces of the fresh root, chipped small, to one pint of dilute alcohol; macerate for fourteen days." The dose of this tincture for adults is from twenty to fifty drops, repeated as often as required.

Dr. J. Douglas regards it as almost a specific in gonorrhœa. He has found it a most uniform, speedy and permanent cure in all and numerous cases which he has treated. He gives a tablespoonful, night and morning, of a tincture made by placing a handful of the root in a bottle of whisky; after a few doses its narcotizing effects are strongly marked, and the beneficial results immediate.

The whole of this plant, flowers and root, possess the same medicinal virtues.—*Charleston Med. Jour.* S. C.

Cholera.—This fell disease has once more made its appearance in England; and there can be no doubt, if it be true to its antecedents, that it will visit the shores of America during the course of the approaching summer. Should it do so, it will again find us unprepared, and the usual mortality and panic will be the result. Six months previous to the outbreak of the cholera of 1854, we warned the authorities of its approach, and urgently advised the adoption of measures calculated to arrest its progress and disarm it, in a measure, of its power. Our warnings, however, were unheeded, and a mourning community were insulted by the solemn mockery enacted by short-sighted and incapable officials, in the great activity displayed to check the progress of an epidemic which had gathered its victims, expended its power, and was already rapidly on the decline.

During the week ending Saturday, October 17th, there were registered in London four deaths from cholera and choleraic diarrhœa; whilst in the West Ham district, there occurred seven deaths from the same diseases. During the week ending October 24th, six deaths from cholera and choleraic diarrhœa were registered. It is to be hoped that these cases are merely sporadic, for not a year passes without a few deaths from cholera occurring in London Some of those recorded, however, appear to bear an epidemic character.—*Medical Chronicle.*

Good Effects of Guaiacum in Cynanche Tonsillaris.—Dr. Brinton has been treating several cases of cynanche tonsillaris, at the Royal Free Hospital, on what he informs us has been his usual plan for many years—a plan so simple and so efficacious as to deserve mention. He regards the tonsils as an offshoot of the intestinal canal, and considers that not only is constipation, in most cases, an element of the malady, but that, on the above view, the inflamed structures are best relieved by free purging, and perpetual gargling and fomentations with hot water. For the first of these indications he relies chiefly on powdered guaiacum, which he gives in large (one scruple to one drachm) doses, every four hours; often in combination with opium, aloes, and jalap, and suspended in mucilage. He finds that, if commenced tolerably early, this treatment generally averts all abscess, and even later, rapidly removes the malady, while it allows of a rapid recovery, very unlike the long convalescence which often follows bleeding, blisters, and tartar emetic.—*Lancet.*

Cold Applications in Pneumonia and Pleurisy.—Prof. Niemeyer, in his contributions to clinical medicine, expresses his opinion, based upon numerous observations, that in pneumonia and pleurisy cold applications (around the chest and back) are not only unaccompanied by danger, but as efficient here as in inflammation of external organs. They produce great relief, and the patients, even children, ask for their renewal when they have become warm. Dr. N. saw, under this treatment, the exudation cease earlier, the fever extinguished sooner;—and the patients often returned to their work on the seventh or eighth day, while he never observed metastases or the consequence of cold from his treatment. In the latter stages of these diseases, Dr. N. gives preparations of iron with great success, on the theory adopted by distinguished pathologists, that the blood-corpuscles are materially diminished in these diseases.—*N. Y. Medical Report.*

Successful Ovaritomy.—Dr. H. N. Bennett, of Ct., reports (*Am. Jour. Med. Sci.*) a case of successful ovariotomy in a patient, *æt.* 24 years, unmarried. The tumor was a multilocular cyst, seventeen inches in circumference; her recovery was rapid and complete.

Successful Removal of both Ovaries.—A case is reported in which both ovaries were successfully removed by Dr. Potter, of Geneva, N. Y. The patient, *æt.* 25 years, married, had suffered two years from a tumor of the right ovary. The left ovary was also diseased, but not greatly enlarged. —*Am. Jour. Med. Sci.*

Editorial and Miscellany.

VERITAS ET JUSTITIA, SINE TIMORE.

Report from St. Mary's Hospital.—We find in the *Peninsular* for December, a sketch of the origin, and a statement of the present condition, of St. Mary's Hospital. Never having seen an *official* report of this institution, during the whole twelve years of its existence, we took up the paper with the hopeful assurance of gratifying our desire to know some facts, concerning which the tax-payers of our city, as well as the "hand of charity," ought to have known long ere this.

The editors first inform us, in their preface, that "*the paper was written for submission to a superior ecclesiastical authority;*" but, in their closing paragraph, they style it an "*unpretending narrative*" of the efforts by which St. Mary's Hospital has become "*an established institution of the city*," and express the hope that our fellow-citizens will carefully examine the paper, "from which they will learn *how much* relief from sickness and want may be traced to their own munificence."

Now, this very question, "*how much relief*" has been afforded by our fellow-citizens, is of all others, the most interesting and important, just at the present time. The project of erecting an "Alms-House," which would supply all the demands of a city hospital, is now before our municipal authorities, and agitating the minds of our citizens. Policy would seem to have dictated that the officials of this already-established institution of our city should present all the facts that have reference to the economy, or appeal to the liberality, of our municipal interests. Indeed, a proper regard for the "munificence of our citizens" would call for a full annual report, setting forth all the facts, financial and executive. Then we should know whether the institution is worthy of the liberality which has been bestowed, and whether, all things considered, it might not be made to answer all the present demands of a City Hospital.

The report tells us that the institution, as it stands, has cost about $26,000, to which the citizens of Detroit have contributed the sum of $10,000. But it has failed to inform the public, from whom so much of material aid has been received, just "*how much*" in the

aggregate, or even to give us the facts by which we may know how much is paid *annually*, by our city and county, for the support of the poor. All that we find upon this point is, that the institution receives from the city and county, for each patient, $2.50 per week, and from those who pay for themselves, from $2.00 to $5.00 per week. The report gives us the number of patients treated annually, male and female; their nativity and religious faith; the number of deaths, and those that have been discharged as cured, improved or incurable. All well enough so far as it goes.

To the medical man, however, the report is of no interest or value. It presents no data worthy of being added to our statistical tables, nor a single practical deduction in support of the principles of medical science.

The editors of the *Peninsular* have taken the liberty to append to the report a *schedule of operations*, with the *name* of the operator! The editors are alone responsible for this *extremity* of the "narrative; and we have no doubt their readers would be glad to learn what it was intended to *show?*

It seems, from this exhibit, that seventy operations, great and *small*, have been "done" in that institution, up to June 30th, 1857, during a period of about 12 years,—making an average of a little over five operations per year. Is this fact offered as an *advertisement* of the *clinical* department of the University, *as it now stands?* If so, the advantages could not be better illustrated.

Prominent among the numerous minor operations reported in the schedule stands: "Operation *for* Paracentisis Abdominis"!! This must have been intrinsically a surgical disease; and as the results of the three operations for this *new malady* are not given, it is but fair to suppose that it was deemed advisable, on due reflection, to spare the blow to surgical science, which had proved so fatal to the unfortunate poor.

But why should the editors offer this as a complete report, and yet leave out of the list the name of Dr. E. M. Clark, who, as they well know, has performed, in that institution, a goodly number of important operations? What is the standard of merit which has been adopted in the *selections* of surgical operators in St. Mary's Hospital, as shown by this attempt to manufacture surgical fame? Is it *servility* rather than competency? If so, the schedule indicates justice in *one* instance at least, and serves to illustrate the proscrip-

tive policy which has ever been adopted by the medical administrator of that institution.

The *Peninsular* has *modestly* informed us how the present incumbent received his appointment as Surgeon and Physician in Chief of St. Mary's Hospital. We give it in the language, and with the italics of the report, as follows:

" * * But the eye of the all seeing God watched over the interests of the house of His suffering members, and the *hand* of His *Providence* led forth Professor ZINA PITCHER, to whom He, in His infinite wisdom, saw fit to confide the temporal welfare of His flock."

This ought to be considered as *ironical;* for, if we contrast the medical supervision of this institution with that of any of the numerous hospitals of our country, we should be compelled to regard this so-called manifestation of the Hand of Providence as an *afflictive dispensation.*

The number of patients treated in this house, since it was founded, in 1845, amounts in the aggregate to 5,900, or an average of nearly 500 a year. For the last three years, commencing with 1854, the yearly number of patients treated has been as follows: In 1854, 1170; in 1855, 908; in 1856, 790,—making a yearly average of 965. Now, if there is any one man on earth capable of doing full justice to this number of patients, and at the same time attend to a long-established private practice, then we admit that it would require the Hand of Providence to point him out. We are not surprised that the report shows, in its rate of mortality, *one death in every nine patients.*

St. Mary's Hospital, although the result of private enterprise, is in fact a public institution. The citizens of Detroit have contributed liberally to its establishment and support. It "has become an established institution of the city." As citizens, then, we have a right to expect that it will be so conducted as to accomplish in the best manner the great purposes for which such institutions are designed. The medical profession, too, have a right to expect that all its advantages will be cultivated and improved, and made to contribute to the advancement of medical science, by recording anomalies which occur in the phenomena of disease—the results of treatment and studious observation. This can only be done by a *division of labor.*

We are informed by the report that Dr. Pitcher "has been aided from time to time," by three or four other physicians; but, so far

as we can learn, there has never been that order and systematic arrangement in the medical administration, which has long been so successfully adopted in other institutions of the kind, and which is indispensable, both as regards the claims of medical science, and the most successful treatment of the patient. *One man* has had the care of from twenty-five to one hundred patients daily. Now, why not, instead of this, appoint a Medical Staff, as in other institutions of the kind, and assign a ward or section to one physician, the same to another, and so on—appointing as many physicians as necessary to do the work easily and well. Then require each physician, at the end of his quarter, or term of office, to present a full report of the number of patients treated, together with their diseases, and whatever he may have observed in the effects of remedies, or considered valuable for statistical purposes. There are physicians enough in our city who would be glad to give their services gratuitously, for the advantages of observation and study which such an opportunity would afford. We should then have something better than a mere apology for a report—something that would be a credit to our city rather than a self-adjusting advertisement, owned and engineered by an editorial quartette.

The report has paid a well-merited compliment to our worthy Director of the Poor, L. B. Willard, Esq.; and also to the officers of the Michigan Central and Detroit & Milwaukee Railroads.

In conclusion, we can only express the hope that the officials of St. Mary's Hospital will yet be free to act by what we confidently believe would be the dictates of their best judgment, and adopt an organization and system of management which will bring into requisition the best medical talent of our city, and most subserve the great purposes which such an institution is designed to accomplish. When this is done, St. Mary's hospital will be *worthy* of the self-sacrificing devotion of the Sisters of Charity. R.

Jenner's Test for Genuineness of Vaccination.—The celebrated Charles Fox, once said to the discoverer of vaccination: "Pray, Dr. Jenner, tell me of this cow-pox that we have heard so much about;—what is it like?" "*Why, it is exactly like the section of a pearl on a rose leaf.*"

Physicians would do well to remember this evidence of a pure and successful vaccination.

[*Apologetic.*—We crave the indulgence of our readers for devoting so much space, in the present number, to an article so largely personal in its bearings and interest. It will be seen, however, that we are acting in *self-defense.* We were charged, by insinuation, with infidelity to the University—a charge well calculated to injure us in the estimation of the Regents and Profession, and which, in the Nov. number, we briefly repelled. A reiteration of the charge renders the following article a necessity.]

The Senior Editor of the Peninsular Journal.—Our readers will remember that, in the November issue of the *Independent*, we quoted, entire, an article from the *Peninsular Journal*, containing an insinuation, which, in our reply, we termed cowardly, and proved, by a statement of facts, to be false. The authorship of the article not being indicated, we dealt only with the *insinuation*, and, in accordance with our usual habit, applied the *right names to the right things.* We now regret to see that our venerable friend, the senior editor of the *Peninsular Journal*, in a reply to our article, over his initials, Z. P., fathers the article and the insinuation which we so justly designated; for it is impossible for us to see that the authorship alters, in any degree, the *character* of the insinuation. He takes to himself qualities of "cowardice and mendacity," which we applied to the insinuation, and says:

"The movement of our blood is not accelerated by the application of such epithets to ourselves, because we know that they are not bestowed by *gentlemen* upon their equals."

Is the senior editor aware that the application of this principle, *judging him by the words of his own mouth*, will convict him of not being a gentleman? If not, let us refer him to the July number of his Journal for 1856, where, in an unprovoked and undignified attack upon the then senior editor of the *Independent*, he speaks as follows of the latter gentleman, and a specimen previously described by him:

"* * * * there is good reason for doubting whether such another specimen can be found, out of that country where *mendacity* is not regarded as one of the attributes of the subject."

Verily, we advise our venerable friend to scrutinize his own record more closely, when coining tests for gentility! The senior editor further says:

"When the *Peninsular* came into the hands of its present conductors, it claimed to be the organ of the Medical Profession of the

State [?], and promised, as such, to take note of the errors of administration, that might creep into the Medical Department. * * If, in fulfillment of this promise, the Professor of Surgery should fancy himself singled out, it may prove to be only another case of the fly upon the coach-wheel."

Judging from previous exhibitions, we confess ourself not a little surprised at the candor of this last allusion; for the only possible application which it admits, is one which would liken the senior editor of the Peninsular, in his former and present criticisms upon the administration of the Medical Faculty, to the sapient fly, criticising the construction of the vehicle, upon the wheel of which it had chanced to alight, and of which it could see about as much as the senior editor, and Emeritus Professor, does, of the practical working of the Medical Department.

But let us see how this valiant watchman upon the towers of our medical Zion has performed his self-imposed duty. At the time he donned his armor, the present arrangement of the surgical course—which, be it remembered, continues through the whole term—had been in operation for two years. The session following, another "error" was suffered to "creep in," by the adoption of a plan by which the anatomical course was cut short, "indefinitely," at the latter portion, and the course on Materia Medica at the commencement of the term—the Professor of Materia Medica being a co-editor of the *Peninsular Journal.* Yet notwithstanding these "errors creep in," not a note of alarm is sounded by this vigilant and faithful sentinel, until two years after, when "Faculty arrangement" has required the extension of the time-curtailed courses through the term, and *we* have incurred his displeasure by an independent and fearless advocacy of measures which we regard as conducive to the good of the University and the Profession. But what is the chief note in his alarm? Hear it:

* * * * "want of diurnal regularity in the delivery of lectures, * * by which certain subjects were crowded out of place, to the prejudice of students who thus found the symmetry of the course of instruction violated."

Now, when it is remembered that we lecture twice daily on two days of the week, instead of once daily on four days, it will be seen how *very far* "subjects are crowded out of place," and how much the symmetry of the course is violated! One-half of our lectures occur on the *same days* that they would if "diurnal regularity prevailed—the other half are "crowded out of place" *one day! A distortion of*

one day in a six month's course ! ! Here our friend certainly strains at a gnat, and in the "error" ignored, as detailed below, it will be seen that he commits the camel bodily to his deglutory apparatus; for another *most serious and unparalled* "error" has been permitted to "creep in," which he fails entirely to notice; and as we are also "walking about our Zion, marking her bulwarks and telling the towers thereof," we will indicate it. We allude to the discharge of his own duties *by proxy;* and we wish we could express the conviction that the *Clinical* Professor "will hereafter give *his* whole energies to an institution, from a professorial connection with which he has" *not* "derived his principal" or even *any* "claim to personal and public consideration." That our readers may appreciate the last remark, we again quote:

* * * * * * "that the Professor of Surgery will hereafter give his whole energies to an institution, from a connection with which, he has derived his principal claim to personal and public consideration."

In reference to this *characteristic insinuation*, we would only remark, that a private course of lectures, sustained for three successive years, constituted, at the time of our election, our "claim to public consideration," which claim the Board of Regents admitted by our appointment; and we certainly congratulate ourself on having *earned*, by public teaching, whatever claim we have to "personal and public consideration," and that it is not based upon merely *nominal* distinctions, or *accidental* honors.

"Some men are born great; some achieve greatness; and others have greatness thrust upon them."

We are content to labor for the *achievement* of whatever portion of greatness falls to our lot, and leave the senior editor of the *Peninsular* to determine the source of his own greatness. But let us hear him further:

"If we were not restricted both in time and space, we should make some remarks on the neglect of the rule requiring a critical examination of the semi-monthly theses of the students, growing out of the other abuse."

Now if the worthy senior of the Peninsular, had been as familiar with what is going on in the Medical Department, as became one who assumed the critic, he would never have penned the above sentence; for he would have known that during the current year, the same method of examination of the theses of students, had prevailed in the surgical, as in the other departments. He would have known

too, that there had never been a time when a *thoroughly critical* examination of the theses had not been made. But the eyes of our venerable friend improve with age; and with

"Optics sharp I ween,"
He "sees what is not to be seen."

In his former article, he says:

"In what way this habit or custom produces evil, we do not propose to speak at this time."

Again in his last ebullition, as above quoted, "time and space" "restrict" him from saying all that he has to say. Now we beg the senior to come out *openly* and *manfully*, and say distinctly, *all* that he has to say, and not to fire *insinuations* from behind a tree.

In conclusion, we again respectfully submit to the Board of Regents, the question of alleged Faculty mal-administration, which so seriously exercises the senior editor of the *Peninsular Journal;* and we take occasion to reiterate the sentiments advanced in former articles, viz.:

First—That in country medical schools, a portion only of the Faculty can mantain a residence in the locality of the institution.

Second—That in the Medical Department of the University of Michigan, the course of lectures of each of the non-resident professors is much more perfect than that of the same class of professors in any other school.

Third—That in a country location, a medical school cannot attain a high grade of usefulness; for in such a location, it is impossible to furnish to the student a *practical* education.

Fourth—That the history of country medical schools indicates the fact that they cannot sustain a vigorous, prolonged existence; and also, that *nearly all* of this class of schools in the United States, *have died from inanition.*

Fifth—That the Medical Department of the University of Michigan, while located in Ann Arbor, must remain content with a secondary rank.

Sixth—That by a removal to Detroit, where a *practical* course could be instituted, the time of study could be extended, the lecture term prolonged, the standard of graduation elevated, and enabled by its munificent endowment, to *insist upon compliance with all its requisitions*, it could be placed in advance of all other schools in the United States.

Seventh—That the removal is eminently practicable, and demanded alike by the wants of the student, and the enlightened sentiment of the Profession.

Eighth—That in consideration of her *ability* to accomplish this great work of reform, the University of Michigan should regard it as her HIGH PREROGATIVE and SOLEMN DUTY. G.

B. FRANK PALMER AND HIS ARTIFICIAL LIMBS.—An invention which serves the purpose of alleviating the suffering and adding to the comforts of the afflicted, entitles its author to the thanks of the human race, and should constitute letters patent to the title of *Public Benefactor.* Such is the invention of B. Frank Palmer. Deprived of one of his legs at the early age of eleven, we find him struggling manfully along life's pathway for education and livelihood. One effort of this struggle was the purchase of one of the then celebrated Anglesey legs. This limb did not satisfy him; and, true to his manhood, he directed his own inventive genius to the work of producing a better. Armed with a cooper's shave and a jack-knife, with no practical knowledge of mechanics, he set to work upon a section of a willow tree, to fashion the first specimen of what has now become the most perfect artificial limb ever made. Completing and mounting this specimen, at the age of twenty-two, he started for the National Fair at Washington, in May, 1846, when he made the acquaintance of, and received encouragement from, distinguished men. In 1851, Mr. Palmer visited London, to compete with the inventors of the old world at the great exhibition. Victory and Palmer's leg went in company, *and have never, since then, broken the association.*

Mr. Palmer has just completed an improvement in the *self-acting arm and hand*, thus adding another large figure to the debt of gratitude which the world owes him. Truly, we regard the inventive genius exhibited in his works alike honorable to the possessor and beneficial to the world. Limbs may be obtained directly of Mr. P., by visiting him at 1320 Chestnut St., Philadelphia, or they may be ordered through Messrs. Higby and Stearns, 162 Jefferson Avenue, Detroit.

THE STATE MEDICAL SOCIETY.—When we compare the feeble existence of the Michigan State Medical Society, with the sturdy vitali-

ty which characterizes the Medical Organizations of neighboring states, we confess to a feeling of deep and overpowering mortification. But when we remember that during the four years of its existence, its meetings have all been held at Ann Arbor, we are not surprised that it has failed entirely to secure the energies and affections of the Profession of the State; and now that a new order of things has been instituted, in reference to the places of meeting, we are led to cherish the hope that a period of renewed vitality and vastly increased usefulness is at hand.

By an amendment of the Constitution, effected at the last annual meeting, the Society will hereafter hold Biennial Sessions on the third Wednesday of January, at Lansing, during the regular sessions of the Legislature; and on alternate years, its meetings will occur at such time and place, as may be determined by the Society, at the meetings *not held at Lansing.* The object of this arrangement is twofold; first to secure a recognition from the Legislature, similar to that which is enjoyed by the N. Y. State Society; and second, to distribute the alternate meetings among the principal towns, and thus augment the general interest felt in the Society, by the Profession in widely remote sections of the State.

It will be seen that the coming meeting, on the 20th inst., is important in respect to the place of meeting two years hence, for according to the Constitution as amended, this point must be determined at this time. We trust to see a goodly number of delegates and volunteers at the ensuing meeting. We appeal to the Profession; "come up and help us." Let not the Peninsular State be any longer a reproach in the family of State Medical Societies.

G.

A Model Prescription.—Abernethy frequently compressed a vast deal of meaning into a very short prescription. He was once consulted by a lady about a nervous disorder, the multitudinous and fanciful symptoms of which, she proceeded to give in detail. Naturally impatient of long stories, he interrupted her, by holding out his hand for his fee; a one-pound note and a shilling, constituting the usual fee, (a guinea) were placed in it; the shilling he immediately returned to his patient with this advice: "*There Ma'am! go and buy a skipping rope; that is all you want.*" We commend the prescription to the Flora McFlimsey's of our day and generation,

Removal of the Medical Department.—We cannot refrain from making the following extract from a private letter, as it so clearly expresses the general sentiment of the profession on the subject of medical education in Michigan. We should be glad to hear from the writer often, and are anxious to add his name to our list of collaborators.

"Your articles in the *Independent*, I have read with satisfaction, and the arguments therein advanced, cannot but commend themselves to an unprejudiced well-wisher of our Medical Department.

It is not within the range of probability, that Ann Arbor will ever be of the requisite size to warrant the residence of the necessary talent to fill the chairs of that Department, and it can hardly be expected that such men will absent themselves for six months in each year from their fields of practice, for the present inadequate remuneration. It seems to me, there can be no man in the *practice* of medicine, who is not heartily in favor of giving to the student the best advantages, for *they* are sufficiently imperfect to prepare for the onerous and responsible duties of a physician. That Ann Arbor can never afford such advantages, ought to be sufficient to warrant the removal, if it be practicable.

As it is, we can never hope that the school will be more than a preparatory institution, answering very well the purpose of rudimentary instruction, but sadly deficient in all the means for its *practical* application.

Many other reasons must be suggested to any candid consideration of the subject, so obvious indeed, as to render it superfluous to particularize. I am fully satisfied that this can only be *a question of time.*"

Wyandotte, Nov. 17th, 1857.

Editors of Medical Independent:

Will you please give the following notice an insertion in your December and January numbers.

MEETING OF THE MICHIGAN STATE MEDICAL SOCIETY.

In accordance with the Resolution passed at the last meeting of the above Society, the next Annual Meeting will be held on the 3d Wednesday (20th) of January next, in the city of Detroit, at ——— at 10 A. M.

Members of Committees please take notice and prepare themselves accordingly.

E. P. Christian, *Sec'y.*

THE

Medical Independent,

A Monthly Review of Medicine and Surgery.

EDITED BY

MOSES GUNN, A. M., M. D.,

PROFESSOR OF SURGERY IN THE UNIVERSITY OF MICHIGAN

AND

L. G. ROBINSON, M. D.

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THE
MEDICAL INDEPENDENT:
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Review of Medicine and Surgery.

VOL. 3. DETROIT, FEBRUARY, 1858. NO. 12.

Original Communications.

ARTICLE I.—*Phenomena Connected with Fermentation, and some Experiments upon its Causes.* By HENRY ERNI, Professor of Chemistry and Pharmacy in the University of Vermont.

Fermentation we call, in common life, that process by which liquids containing sugar are decomposed into alcoholic products, such as wine, beer, whisky, etc.; but, chemically speaking, we ought to extend the definition still farther, for other organic compounds besides sugar undergo decomposition under similar circumstances.

In fermentation, we have to distinguish, first, the ferment, a nitrogenous substance which acts decomposingly upon a second complex body containing no nitrogen.

As the so-called alcoholic fermentation, in all of its relations, has been much better studied than any of the others, we shall treat, here, almost exclusively of the former.

If the expressed juice of grapes, or other vegetables, containing sugar and, at the same time, some albuminous matter, as it always does, is exposed to the air at a temperature of from 10° to 15°, we perceive, after a while, an evolution of carbonic acid gas (which, when accumulating in cellars where fermenting liquors are stored, often gives rise to acci-

dents, but is easily removed by caustic lime). The mass comes now to be in constant motion. Particles of the ferment (yeast), loading themselves with the liberated gas-bubbles, become specifically lighter, and, rising to the surface, discharge the gas and then sink again. This process continues until all the sugar is decomposed, in the place of which we now find alcohol. When the amount of sugar greatly predominates, as in southern wines, the yeast loses its power before all the sugar is decomposed: hence such wines are sweet.

On the same principle depends the brewing of beer, the manufacture of whiskey, etc. Here, the starch found in barley, corn, and potatoes, is, by the action of malt (containing diastase), first converted into sugar, which latter is decomposed by the addition of yeast.

If we bring a drop of any fermenting liquor under the microscope, we will find it to contain a large number of vegetable cells, eliptical in form, and varying in size from 0.005 to 0.01 millimeter in diameter. In the Lyman grape raised in Vermont, I found the cells rarely to exceed 0.002 m. m. These cells multiply by budding—*i. e.*, by shooting forth branches from one or several parts of the cell surface, which branches, after a certain growth and development, separate from the parent cell.

Moticherlick thus observed one cell to pass thrice, in twenty-four hours, through six different generations. As from the first moment, when tracing fermentation, we observe this fungus to be present, some chemists attribute this decomposition to its vital activity, whilst others, like Liebig, consider the cause of this phenomenon to lie in the power of the ferment itself, in a state of decomposition (that is, in chemical action), to produce a similar metamorphosis in compounds placed in contact with it. Thus, this savant thinks it probable that miasmata should act as ferments on the blood, and explains the action of sausages, poison, &c. Brendecke published a variety of experiments, which seemed to show that porous substances, such as straw, feathers, alum, pulver-

ized charcoal, potato starch, flowers of sulphur, scraps of paper, and even small particles of metals (tin), can produce fermentation when brought into a solution of grape sugar, to which some tartrate of ammonia had been added. Should this be so, it appears probable that yeast, though made up of vegetable cells (a fact formerly denied by some chemists), might, like the substances enumerated, excite fermentation, not by its vital power, but simply by its looseness of porosity.

In repeating some of Brendecke's experiments, I employed grape sugar, extracted from honey by means of alcohol and purified by boiling with charcoal, and cane sugar, prepared from white refined sugar several times re-crystalized from solution in hot water. In the following experiments, one part of sugar and eight parts of water were usually employed.

First Experiment.—Common straw was treated with cold potash-ley, to dissolve any albuminous substance united therewith. After twenty-four hours, the straw was washed with water, and the last traces of the potash removed by dilute hydrochloric acid, and the straw again cleansed under a stream of water.*

Second Experiment.—The straw, cleansed as above stated, produced no fermentation in solutions of either grape or cane sugar.

Third Experiment.—Additions of cream of tartar, or tartrate of ammonia, to the last solution, had no observable effect.

Fourth Experiment.—Finely-pulverized quartz, added to the solutions of cane and grape sugar, caused no fermentation during four weeks, although some mould was formed, which fructified and yielded spores. Such was also the case, not only in this, but also in some of the previous experiments.

Fifth Experiment.—In a solution of cane sugar was placed some common, uncleaned straw, in order to see if it excited fermentation; and, if so, to ascertain if it might not be owing to the development of fungi. After twelve days, fermentation commenced, and, at the same time, a microscopical

* Most of these experiments were published by themselves, in the proceedings of the American Association for the Advancement of Science, in 1851.

examination of the liquid revealed the presence of vegetable cells, indented with upper yeast.

Sixth Experiment.—The same experiment, performed with grape sugar, produced the same result. Fermentation, however, commenced a few days earlier.

Other experiments were now made upon yeast (obtained from a brewery). Rousseau had previously made known that fermentation could be induced by yeast, even in the presence of vegetable or mineral poisons, if rendered acid when mixed with the solution of sugar. The following trials, made by me, did not confirm these statements:

First.—Upper yeast, brought into solution of sugar cane, acidified with tartaric acid and poisoned with arsenious acid, produced no fermentation. The same mixture, without the addition of arsenious acid, fermented after two days. The liquor, which was strongly acid, turned sweet, and fermentation commenced.

Second.—The same trial was made with liquid acidulated with acetic acid, and no fermentation took place. The same mixture, without the arsenious acid, produced fermentation.

Third.—The above two experiments were repeated, using oil of turpentine as a poison instead of arsenious acid, and the same negative results obtained.

Fourth.—Yeast, added to cane or grape sugar solution, acidified with tartaric or acetic acid, and poisoned with a few drops of kreasote, excited no fermentation whatever.

Fifth.—Mixtures of cane and grape sugar with yeast, acidified with cream of tartar, and poisoned with considerable quantities of arsenious acid, yielded fermentation. Perhaps, in this case, the arsenious acid formed a chemical compound with the cream of tartar, as such a salt was proved to exist by Mitcherlich.

Sixth.—The same experiments repeated, with this difference, that, in the place of arsenious acid, kreosote and oil of turpentine were employed, showed no fermentation.

When the poisoned liquids were examined under the microscope, it could be plainly observed whether the poison

had taken effect, the albuminous layer (Mohl's primordial utricle), lying closely within the cell-membrane, appeared to have undergone a change, similar to that produced when yeast was boiled.

It has also been asserted, that the boiling of yeast permanently destroys its power as a ferment.

Seventh.—Brewer's yeast, much diluted with water, was boiled in a glass vessel. A glance at such cells under the microscope revealed that their vitality had been destroyed. Instead of being eliptical in shape, as at first, many were pear-shaped, looking darker; the muclaginous lining (primordial utricle) was partly removed from the cell-membrane (coagulated). Yet boiled yeast brought into sugar solutions, on repeated trials, caused fermentation. A microscopical examination of the liquid, at this period, showed that new cells had been formed.

The experiment of Ludersdorff (*Pharm. Ceut. Blatt*, 1846, 575; Pogg, *Annal*, LXVII, 408), who stated that yeast, the organization of which was destroyed by grinding, induced no fermentation, was repeated; but, on trial (grinding yeast on a smooth glass plate), I was convinced of the impossibility of thus annihilating the cellular structure, a fact readily accounted for, if we reflect that the largest cells do not exceed 1.01 m. m. in diameter.

Intending to test the statement that washed yeast loses considerable of its power as a ferment, I experimented further as follows:

Ninth.—Brewer's yeast was for some time digested with pure water on a filter. No difference could be observed when such yeast was mixed with sugar solution.

Tenth.—The filtrate passing through the filtering paper, poured into a sugar solution, excited no fermentation in the course of several weeks, although other filamentous fungi flourished and lived luxuriantly in the liquid.

Mitscherlich proved by experiment (*Pogg Annal*, 55; 224) that the yeast-cells must be brought in actual contact with the solution of sugar in order to cause fermentation. Re-

peating his experiment, I took a common lamp-chimney, and closing one side with a double layer of filtering-paper, the tube was now vertically suspended in a solution of sugar, and some yeast, diluted with water, put into it. The solution of sugar, entering the tube through the bibulous paper, commenced soon to ferment, whilst the liquid outside remained unchanged during an entire week. Helmholtz also found that the action of fermenting grape juice is not communicated to another portion of the same juice, which, put into a vessel closed with a bladder, was immersed in the fermenting liquid.

Some other experiments upon different kinds of fermentations were now made. In the acetic viscus, butyric and lactic fermentations, apparently different kinds of fungi developed themselves, and were traced, in each kind, as soon as decomposition commenced. Blondeau has, to strengthen the idea that different kinds of fermentation were due to different fungi, lately come forward with new proofs, as he believes; and assigns to each species its proper botanical name. In regard to the origin of these yeast cells, we have to contend with the same conjectures and diversity of opinions, as when accounting for the sudden appearance of millions of infusoria in stagnant water, or in explaining the origin of intestinal worms.

Guy Lussac believes himself to have proved by experiment that grape-juice, expressed in an atmosphere of hydrogen or carbonic acid, remains unchanged for months; but, by allowing access to only a few bubbles of air or oxygen gas, fermentation takes place, even on the total exclusion of these gases afterwards.

Schwann favors the idea that the germs of the yeast-fungi are diffused in the air and water (like the eggs of infusoria, which have actually been traced in the air, water, mist, and even snow), and that these develop themselves when brought into favorable circumstances. He establishes the experimental proof, that when air is first passed through an ignited tube before coming in contact with solutions of sugar,

containing besides some nitrogenous substance, no fermentation is excited. The same negative result is witnessed when the air is conducted through an apparatus filled with concentrated sulphuric acid, or a strong solution of caustic potash. The germs being thus destroyed by heat or chemical agencies, no yeast-fungi are formed. From this fact, Appert's method for preserving different kinds of food may find its explanation. Milk, meat and vegetables are put into tin cans; these are put into boiling water and immediately hermetically sealed.

Liebig's explanation is, that the trace of oxygen in the air that may still be present with the food, is at once taken up by some parts of it, without giving rise to the fermentation of ferment at this high temperature; whilst Schwann believes that, by the destructive influence of the heat on the germs of fungi and infusoria, the food is preserved.

Though the old theory of spontaneous generation, even when limited to some of the lowest orders of vegetable and animal life, loses daily more ground, and the "*omne vivum ex ovo*" has become the axiom with the naturalist; still, there yet remain many unsettled points in connection with this matter, which require further investigation. Thus, if we take it for granted that, according to Guy Lussac's experiment, a few bubbles of oxygen gas, obtained from chlorate of potassa at a high temperature, induce fermentation (when admitted to grape-juice surrounded by an atmosphere of carbonic acid), it must be admitted, that in this case, any vegetable germs must have been excluded, and still fermentation took place; and, if so, were there no yeast-cells present?

The effect of antiseptics, arresting fermentations (as, also, putrefactions and eremacausis), may be differently explained, according as we favor Liebig's or Schwann's theory. The former assumes that corrosive sublimate, arsenic, Kreasote, &c., uniting with the ferment, prevent the decomposition in the ferment, and in consequence that of other organic bodies in contact with them. Schwann believes that these substances, acting as poisons, destroy the life of the previously-

described organisms, and that hence the metamorphosis of vegetable bodies is arrested by them.

We must acknowledge that, notwithstanding all of the voluminous writings on fermentation, but little is known of its original cause, and no one of the theories advanced is competent to the full explanation of all the facts.

ARTICLE II.—*Chapters from an Unpublished Monograph.* By H. R. SCHETTERLY, M. D.

Sensation an Effect of Electrical Action.—The electrical theory of life is not entirely new. Dr. Priestley first proposed it in 1774. Since then, Professor Faraday, Mell, Dumas and Prevost have advocated it; and Dr. W. Philip asserts, in his Experimental Inquiry into the laws of the Vital Functions, and in the Philosophical Transactions, that the identity of Galvanic Electricity, and the Nervous Fluid, is established by his experiments. In his Physiology, Dr. Dunglison says: "Physiologists of the present day, we think, accord with the electrical hypothesis. The late Dr. Young, so celebrated for his knowledge in numerous departments of science, adopted it prior to the interesting experiments of Dr. Philip; and Mr. Abernethy, whilst he strongly opposed the doctrines of Materialism, goes so far as to consider some subtile fluid not merely as the agent of nervous transmission, but as forming the essence of life itself." But, notwithstanding this array of the most eminent talent in its favor, no physiologist has yet set himself to work to investigate the subject scientifically, so far as is known, though the materials required for such an investigation have been on hand, scattered, in a fragmentary condition, through many volumes, for some twenty years. But Dr. Bostock remarks, in his Physiology, that "before the electrical hypothesis can be considered proved, two points must be demonstrated: first, that every function of the nervous system may be performed by the substitution of electricity for the action of the nerves; second, that all the nerves admit of this substitution."

Now, the attentive reader will have observed that not only this has been accomplished in the preceding articles, with regard to all the most important functions, and could easily be done with regard to the rest; but that, in addition to this, the adaptation of the nervous system expressly to the action of electricity, has also been clearly demonstrated; and every other objection to the electrical theory has been reconciled with it. To enumerate:—1. It has been shown that the principal objection—namely, that no electric current can be discovered in any nerve, during the most intense action of its corresponding muscle,—constitutes an essential condition of the nerves to the action of electricity through them. 2. It has been proved, by W. Philip's experiments, that both digestion and respiration may be kept up by electricity, after the nerves on which these functions depend have been divided, and their normal action destroyed. 3. By Prof. Ure's experiments, it has been shown that muscular contraction, respiration, the most decided, and the most striking expression of the passions and emotions of the mind, may be renewed after death by hanging. 4. By M. Donne's experiments on living animals, it appears that the *acid* skin and the *alkaline* mucous membrane of the intestines or mouth form a voltaic battery, the effect of which is decidedly appreciable by the galvanometer; and that still stronger electric currents exist between the acid stomach and the alkaline liver. 5. By the experiments of Fodera, it is proved that absorption and exhalation are also under the control of, and may be greatly accelerated by, the action of electricity artificially applied to the living organism.

It has been already stated, on the authority of Dessaignes, that electricity may be pressed out of all substances. If, for instance, pressure be made on the eyeball, behind the cornea, so as to affect the retina, concentric luminous circles will be seen opposite the part on which the pressure is applied; and, if the pressure be continued twenty or thirty seconds, a broad, undefined light, which increases every moment in intensity, rises immediately before the eye. If the eyelids be then

opened in the presence of light, and the experiment repeated, a dense cloud appears before the eye, which becomes perfectly blind in a few seconds; but when the pressure is removed the cloud rolls away in a few seconds, and sight is restored. Hence, it appears that the electricity pressed out of the humors of the eye produces the phenomena of light and, when dissipated, leaves the eye blind; but when the pressure is removed, the nerves supply the electricity anew. That this effect results from electrical action, is proved by the fact that, if a piece of zinc be placed under the upper lip and a piece of copper above the eye, the same appearances are produced without pressure. In this latter experiment, physiologists attribute the production of the light to electrical action, but, in the former, to mechanical pressure. But there should be no doubt that the immediate cause of the luminosity is the setting free of electricity in both cases. Anatomists generally agree that the iris of the eye is a muscular structure; yet, unlike other muscles, no mechanical irritation can excite it to contract. But the direct application of solar light and electricity produce contractions of it immediately. This indicates that light and electricity are the same agent, and substantiates the conclusion, already drawn from the fact that animals born with their eyes shut are destitute of calorification, that electricity enters the organism through the eyes, as well as through the lungs—aiding in the process of calorification, and exciting vision at the same time;—for it has been proved that both light and heat are the effects of electrical action. By analogous experiments on the living system, with electrically-related metals, it may also be proved that the senses of taste, smell and hearing are dependent on electrical action for their excitation; and every one knows that the sense of feeling is very acutely excited by the passage of an electric current through any members of the body. From these facts it follows that *electrical action is the primary cause of sensation in general;* for it is unphilosophical, being contrary to the simplicity of nature's uniform laws, to attribute the same effect to more than one primary cause, operating

on the same substance and under the same circumstances; and to conjure up a multitude of primary causes, exciting each other to action, as physiologists are in the habit of doing, is an absurdity, and an effectual bar to all progress in science.

According to Dr. Ritter's experiments, as cited by Prof. Ure, the electricity of the positive pole augments, while the negative diminishes, the actions of life. Tumefaction of parts is produced by the former—depression, by the latter. The pulse of the hand, held a few minutes in contact with the positive pole, is strengthened; that of the hand in contact with the negative is enfeebled. The former is accompanied with a sensation of warmth; the latter, with a feeling of coldness. Objects appear, to a positively-electrified eye, larger, brighter, and red; while, to one negatively electrified, they seem smaller, less distinct, and bluish,—colors indicating opposite extremities of the prismatic spectrum. The acid and alkaline tastes, when the tongue is acted on in succession by the two poles, are well known, and have been ingeniously applied by Sir H. Davy, in his Bakerian Lectures. The smell of oxymuriatic acid, and of ammonia, Dr. Ritter says, are opposite odors, excited by the two opposite poles; as a full body of sound, and a sharp tone, are the corresponding effects on the ears, when the olfactory and auditory nerves are acted on by the two poles. These annunciations may not be so strange as, on first thought, they may appear, when it is recollected that the positive is the discharging pole, and consequently imparts electricity; while the negative is the receiving pole, and therefore abstracts electricity.

In the article on magnetism, it is proved that polarity is an effect of electrical action, and that like magnetic poles repel each other, and therefore recede, while unlike poles attract, and consequently approach each other and adhere. When, therefore, particles of any substance collect together and adhere, arranging themselves in determinate order, and form bodies, it is manifest that those particles are polarized by the

agency of electricity, for this is the only known cause of polarity. Now, the latest microscopic observations on the blood, made by Drs. Young, E. Home, Hodgkin, Dumas, Prevost and others, show that the blood-corpuscles are flattened disks, consisting of a red vesicle, which gives color to the blood, and a central colorless nucleus. Mell, Dumas and Prevost observed that, during the process of coagulation, the vesicles burst, and the central nuclei are attracted together, and arrange themselves into fibres, which form a network that entangles some of the serum and colored vesicles of the blood. These being washed away, the network is found to be pure fibrin. Dr. Hodgkin observed the process by which this network is formed, which is as follows: After the blood has been drawn from its vessels, he first observed a considerable agitation among the corpuscles; but, as this subsided, they applied themselves to each other by their flat sides, forming fibres that were sometimes of considerable length, which often, again, combined among themselves, forming a network. The philosophic reader need not be informed that it is utterly impossible to account for these phenomena on any other principle, than that of electrical action; and this not only explains them completely, but gives us, also, a distant view of the manner in which organization itself is effected.

At present, Physiology consists of a mere heap of observed and experimental facts, and vague conjectures of causation; and yet it must necessarily constitute the basis of scientific medical practice. Who can wonder that, under such circumstances, the practice of medicine remains a mere system of empiricism, when neither the cause of life, nor of disease, is understood, and when certain remedies are prescribed in certain cases, because somebody says he has found them useful in similar cases! Every impression must necessarily be made primarily upon the nervous system, for this alone is susceptible of being impressed. It is, indeed, very probable that the famed *miasma*, which has never been detected,

nor its nature or even existence demonstrated, consists in nothing else than electrical changes, first in the atmosphere, and then, through this medium, in the nervous tissue of the living organism. In the Asiatic Cholera, for instance, almost all the fluids of the system are poured into the intestinal canal, carrying off the electricity from the nervous centres, and thus preventing the development of animal heat. It is manifest that, in this disease, nothing but a change in the distribution of electricity among the fluids and solids is necessary to produce the effects witnessed in this disease; for, under *Endosmose and Exosmose*, it has been shown that positively-electrified fluids pass, through an animal membrane, into negative with great rapidity. That this disease is caused by such an electrical change in the system, is proved by the fact that severe spasms of the muscles always attend it, as they do when the electric circuit, in experiments on animals, is either closed or opened, as shown by Matteucci. Accordingly, the so-called exclusively nervous diseases, are entirely under the control of artificial electricity, when properly administered. By transmitting an electric current from the nape of the neck to the pit of the stomach, Dr. Wilson Philip gave decided relief in every one of twenty-two cases of asthma. From the peculiar relation of water to electricity, so often noticed, it is not strange that it should be exceedingly useful in many diseases; and this relation can alone account for the prevalence of what are called miasmatic diseases in marshy regions and districts where a vast quantity of organized electricity is set free by the decomposition of vegetable matter; or where the free electricity of the atmosphere is absorbed by stagnant water. Miasma is a mere creature of the imagination, whose existence has been inferred solely from the existence of diseases supposed to be produced by it.

ARTICLE III.—*Successful Operation for Vesico-Vaginal Fistula.* By E. M. CLARK, M. D.

Mrs. —— has been afflicted, during the past two years, with a vesico-vaginal fistula, caused by an ulcerative process excited by, and giving exit to, a phosphatic calculus. On examination, the fistula was found to be situated about midway between the cervix uteri and the neck of the bladder —of circular form, and nearly three-fourths of an inch in diameter. Urine dribbled from itconstantly, rendering the patient in every sense wretched.

The external parts were extensively excoriated. The uterus was prolapsed, and its anterior lip much enlarged and ulcerated. The perinæum anterior to the anus had sloughed, leaving a cicatrice too firm to admit of much expansion.

This cicatrice, together with the prolapsed condition of the uterus, rendered it impossible to get as fair a view of the fistula as can ordinarily be obtained.

The patient having been placed on her knees on a couch, with the head and shoulders depressed, with the assistance of several eminent medical gentlemen of this city, I proceeded to close the fistula.

The uterus was carried up and supported in its proper position by a ring having a stem some ten inches in length, which was held by an assistant. By this means, together with the manipulations and speculum recommended by Dr. Sims, I was enabled to reach the fistula.

I pared away the vaginal mucus membrane from the edge of the fistula, to the extent of about three-eighths of an inch. This is emphatically the difficult part of the operation. I then introduced four sutures of fine annealed silver wire—being careful not to allow the needles to penetrate the mucus lining of the bladder. The wires, having been placed, were readily so adjusted as to bring the scarified surfaces in perfect coaptation, and then twisted. The patient was then placed in bed in a prone position, a Sims' catheter introduced, and two grains of opium administered.

I had provided myself with the lead bars used by Dr. Sims, and the buttons used by Dr. Bozman, but I saw no occasion to use either. The twisted suture is much less complicated, and has, in this case at least, given a satisfactory result.

I found it necessary to remove and cleanse the catheter twice daily. A sufficient amount of opium was ordered to keep the bowels quiet till the seventeenth day.

On the ninth day, I removed the sutures, when union was found to be perfect throughout the whole extent of the scarified surfaces. The patient was then directed to insert the catheter, at intervals of from two to six hours, for a few days.

On the seventeenth day, the bowels were moved by an enema,—she having suffered no inconvenience from this prolonged constipation.

The principal inconvenience to the patient, during her confinement after the operation, results from the constant flow of urine upon the nates and vulva. This may be readily obviated by a very simple apparatus—viz: a piece of flexible gum-elastic tube, some two feet in length, attached at one end to the catheter, and at the other to any sort of a vessel which will serve to receive the urine. I use, for this purpose, a transparent glass bottle, which enables me to determine whether the urine is passing freely or not. This tube should be so secured to the patient's thigh, as to prevent traction upon the catheter. This may be done by adhesive plaster, or by tape tied around the patient's thigh.

By the prone position, the fistula is more effectually protected against the injurious effects of the urine; and, after the first twelve hours, the patient will not object to it.

If the Sims' catheter be used when the patient lies on her face, the anterior orifice should be extended back to the angle. The reason will be obvious when you examine the catheter.

This morning (Jan. 5th, 1858), twenty-six days since the operation, I received the following note from my patient:

"DR. CLARK:—The water passes freely, and in as natural

a manner as ever,—attended however, at the close, with a slight pain, the same as when the catheter is withdrawn. Shall I allow it to take care of itself, or shall I insert the catheter occasionally?"

[The operation of which the above is an example has become one of the standard proceedings of surgery. The prone position of the patient, adopted by Dr. C. in this case, goes very far towards insuring success, and enables the surgeon to dispense with the bars or buttons, in the absence of which he can examine the wound from time to time; and, in case of deficient or bad action, he is enabled to make such applications as may be indicated.—ED.]

ARTICLE IV.—*Mechanism of Nervous Action—Prof. Campbell's Prize Essay, &c.* By J. ADAMS ALLEN, M. D.

Facts, whether collected by observers or experimenters, are but the field-notes, by the aid of which the reflecting mind maps out the principles of science. Some people seem to think that the accumulation of "field-notes" is all that is permissible, and suppose that therein they are strictly carrying out the principles of the Baconian philosophy. From this vicious idea, their minds become microscopic to that extent,

> "that, with optics sharp I ween,
> They see what is not to be seen,"

and cannot see what rises before them in colossal proportions. They can see minute resemblances—they cannot see vast diversities. They can see isolated and barren facts—they cannot see their frequent "prerogative" nature, whereby they demand the admission and establishment of profound laws, which will not only include them, but an immense number of, as yet, unexamined instances.

The motto of the work before us—"Observation becomes experiment when used in severe processes of induction"—indicates a truth well worth remembering in this connection.

Experimenters, who are but the hewers of wood and carriers of water in science, having no kind of idea of the symmetrical plan of the building, hold in small repute the labors of the architect and draughtsman of the edifice—him who sees, in his mind's eye, the completed structure or the grand generalization. But experiment, like faith, without works, is dead; and, uncombined with observation, it is inert and unprolific. It is observation which is the vitalizing principle; and without this you may marshal experiments in vain. It is grown a fashion to disparage observation and magnify experiment, as a means of arriving at truth, so that many writers fall into error from mere imitation, with no clear idea of their own whatever. When, therefore, we read of the "severity of the induction" necessary to render "observations equivalent to experiments, we ought to charitably allow that the writer employs other persons' thoughts, to the saving of any expenditure of his own feeble stock of brains. He but follows the fashion of the times, and the sin of that ignorance let us wink at.

Thus much for a contemporary reviewer, who evidently has read no more of this essay than the motto.

The object proposed by Prof. Campbell to himself "is to develop more fully a function of the nervous system, which, though enunciated and described nearly seven years ago in this country, is only now beginning to be recognized by the profession in Europe. We refer to that function which has been termed the *Excito-Secretory*, and which results from the relation between the excitor or sensitive nerves of the cerebro-spinal and the secretory branches of the ganglionic system."

The train of argument, in support of his proposition, is reducible to the following series:

1. The intimate anatomical relation of the two systems of nerves—viz: the cerebro-spinal and the secretory or ganglionic.

2. The peculiar distribution of the ganglionic nerves upon the blood-vessels supplying secretory surfaces and glands.

3. The enlargement of the ganglionic nerve centres in pro-

portion to the activity of the nutrient or secretory process in the organs which they supply, even when the causes of increased activity are only temporary.

4. The effect produced upon nutrition (*e. g.*, *ulceration*) by artificial or pathological section of the sympathetic, together with experiments showing the independence of the circulation, of the cerebro spinal system.

5. Observations and experiments on the fifth pair of nerves —particularly those of Magendie.

From this *resume*, he adopts the generally-received opinion of Bichat, that "to the ganglionic system alone are confided all those important and mysterious processes which pertain to nutrition and secretion.

From the facts set forth in the well-known paper by Dr. Davey, on the sympathetic system (*London Lancet*, June, 1853), "and also from analogies to be found in the animal kingdom and in pathological records, we find that an independent existence can be maintained under the *sole* influence of the secretory system of nerves.

Thus far there is no novelty in the views presented. He then passes to explain the received views upon the relation existing between sensory and motory nerves, as explained by Dr. M. Hall,—the excito motory system.

The time has gone by when it is necessary to dilate upon the immense stride in advance, which both pathology and physiology have taken since that splendid induction of the London physiologist,—the world has placed its laurel crown upon his head, and the century points to him as immortal. Thinking men have long since desisted from attempting to detract an iota from his well-earned fame, to lavish upon whatsoever predecessor, or to gratify the personal malice of whatsoever pensioned organ of opposing professional cliques or colleges. Even hatred itself has forgotten to stand haughtily "non-committal," and has bowed before the supremacy of his genius. Ignorance only talks of "progressive development" and "noise,"—an ignorance so gross that it sinks to a lowerdeep than the profoundest contempt *can* reach.

Prof. Campbell observes:

"These same sensory nerves are not only excitors to the *motory* system, but, under certain circumstances, most of them sustain an analogous relation to the *secretory* nerves, exciting them and modifying their action, diminishing, increasing and altering the secretions, according to the extent and character of the irritation applied. It will be our object, then, to show that the sensory nerves, or, at least, some of them, sustain to the other two portions of the nervous system a *double* relation: *First*, excitors to the motory system, giving rise to the excito-motory system, described by Dr. Marshall Hall in 1837; and,

"*Secondly*, excitors to the *secretory* system, resulting in the *excito-secretory* system, enunciated first in this country in the year 1850, and which second system Dr. Marshall Hall did not appear anywhere to recognize, until the present year, 1857."

In the establishment of this proposition, he cites various phenomena of the animal economy as strikingly illustrative. Thus, the correlation of the skin and kidneys, and internal secretory surfaces, is shown not to be dependent upon the gross hydraulic principle of "driving in of the fluids," or on any fanciful "antagonism" or "sympathy," but to be clearly a reflex function of the nervous system.

"But, in order to study the excito-secretory system in its most obvious relations, it will be necessary to select some portion of this system wherein a single excitor nerve will be found to exercise its influence over an extended region, becoming productive of a diversity of results."

The fifth pair are accordingly selected, and irritations of its branches are traced to a great variety of results, among which we may enumerate:

1. "Modifications in the circulation, secretion and nutrition of the eyeball, which acts are under the immediate reign of the ganglionic system."

2. The same with reference to the nostrils, fauces and pharynx.

3. With reference to cutaneous eruptions—"tooth rashes," &c.

4. With reference to cavities and interspaces—*e. g.*, dropsy,

the urinary secretion, involuntary micturition, &c.,—adducing also the beautiful experiments of Bernard.

Aberrations of secretion in hysteria are also suggested as analogously explained.

In each of these cases, Prof. Campbell points out the particular track of the excitor and reflex action, and clearly develops a large series of otherwise inexplicable phenomena.

In a manner entirely analogous to the excito-motory system of Hall, two classes of nerves—viz: incident and reflex—are presumed—the incident or excitor series being the sensory nerves of the cerebro-spinal system; the reflex nerves being ganglionic (secretory, gray fibre, gelatinous fibre, &c.,).

We do not understand him to mean that any portion of the ganglionic nerve is excitor to its centres in that system. At all events, this is not the point which he considers. The point which is especially insisted upon is that the sensitive cerebro-spinal nerves are the excitors of the ganglionic nerves, precisely in the manner in which they affect the motor fibres of the cerebro-spinal system.

No person can arise from Dr. Campbell's transparent exposition of the law of operation in this case, without becoming fully sensible that the doctrine is one of vast importance in the euclidation of heretofore occult problems of health and disease. The discovery of Hall, though the parent of this, in practical effect upon our knowledge of disease, is of comparatively little moment. Who will claim, for an instant, that diseases of the motory apparatus are to be compared with the vast catalogue that involve the nutrient and secretory?

The clearness, force, and concise brevity, with which Prof. Campbell has presented his views, are worthy of all praise; and his article, as a whole, may be taken as a model medical essay. It affords us one of those *rare* instances wherein prize essays are more than mediocre.

Whoever may have taught these doctrines, or entertained these views, prior to the author of this essay, it is very evident that no person had previously recorded them in printer's ink. So far as the author himself and the medical public at

large are concerned, they are unquestionably original, as they are most certainly seen to be, in the language of the lamented Hall, "of vast importance."

Bichat, whose division of the nervous system into animal and organic is adopted by Prof. Campbell, entertained some very singular ideas with reference to their relation to each other.

Sir Charles Bell observes: "The opinion, borrowed from the continental writers, and more particularly Bichat, has been entertained, that the sympathetic nerve of the human body was the same with the nervous cord found running down the centre of the *vermes*. This is paying too much respect to a name—too little attention to nature."

Bichat supposed that the passions and emotions had their seat in the ganglionic centres (*i. e.*, of the sympathetic), and, by this continuity of structure, could act upon the brain and hence upon animal actions. He recognized, from this loose assumption, what we may term *the influence of a particular mental state*, having its seat in the sympathetic, a secondary effect upon *motions*.

Passion and emotion, located in the ganglionic nerve centres, excite, sympathetically (by continuity with "the nervous cord found running down the centre of the *vermes*"), the brain, the seat of perception and will; and its "reaction on the muscles which receive it (the *affection* or change of form) from the nerves, will produce in them those *motions* which we observe." A *mental act* in the sympathetic ganglion produces a *motion* elsewhere. How this could be explained perplexed him, but he still adhered to the location of the passions and emotions, and suggests:

"Perhaps the internal organs do not act upon the voluntary muscles by the intermediate excitement of the brain, but by *direct nervous communications; how they act is of no consequence.* * * * What is most essential is the fact itself; what is evidently in support of it is, on the one part the affection of an internal organ by the passions; on the other part the determinate *motion* to this affection in *muscles*,

over which this organ *has no influence* in the ordinary series of phenomena;"—that is, except under the influence of emotion or passion.

The nearest approximation of Bichat to the views now under consideration, then, reduce themselves to a possible affection of the *brain* and secondary effect upon the *muscles;* and even this modus appeared so incomprehensible to him, that he inclines to adopt the idea of "*direct nervous* communication."

Broussais, another speculatist, to explain this obscure point, boldly assumes:

"The cords of the great sympathetic are *continuous with the cerebral nerves*, and are to be considered like these latter, as conductors of irritation. This granted, it must of necessity follow that irritations which are developed in the viscera, where the great sympathetic predominates, should be communicated to the encephalic centre.

"It is also equally indispensible to admit that irritations or volitions emanating from the brain should be carried into the ganglionic nerves, and penetrate, by means of these latter, into the tissues in which these nerves are distributed.

"There is then *reciprocity of stimulation* between the encephalic and ganglionic nerves—that is to say, they serve as excitors of each other."

—Because *continuous* with each other!

Again, in explaining the effect of *excessive pain* in producing involuntary agitation and delirium, he says:

"All the *perceptions* being, as I have proved, reflected from the brain to the viscera, the irritation caused by an excessive pain must be transmitted to the great sympathetic."

And again:

"The great sympathetic establishes, in the interior of the body, relations between the viscera, and regulates their particular *movements*. For the exercise of this function, it borrows stimulation from the encephalon, and transmits some to it at need.

"The great sympathetic receives stimulation from the cerebral nerves, which are themselves indebted for it to external bodies, and make use of it to bring into play the cephalo-splanchnic and splanchnic muscles, and the coats of the arteries."

It is thus seen that Broussais starts with the assumption that the ganglionic nerves are *continuous* with the cerebral nerves, and thus their *sympathy* is one of *continuity of structure.* The *brain* and *perception* are the only mediums of what is now termed reflex action; and the action itself is exhausted upon the cephalo-splanchnic and splanchnic *muscles*, and the coats [muscular!] of the arteries—and all these under the vague influence of his omnipotent General Irritation.

The extracts which we have given, "and particularly the last two, contain a very clear enunciation" of the total diversity of the views of M. Broussais from those now before us. They contain the ingenious speculations of an enthusiastic dogmatist; and are at the present time more noticable for the obscurity in which, for a long period, their adoption veiled the whole subject. The bitterest enemies of Marshall Hall never ventured to insinuate, even, that Broussais had any claim to priority in this matter, although they did find, in the sensational reflex phenomena quoted by Whytt and Prochaska, enough of system to give a faint color of support to their ceaseless calumnies upon him. They may be said to approximate the present view, so ably set forth by Prof Campbell, about as the "flux and reflux of fluids" of olden time, approached the beautiful discovery of Harvey. It is deplorable to find that the rancor of professional cliques, and mere personal malice, can lead medical writers to seek to confound the results of sound inductive observation and experiment with the obscure gropings of a speculative fancy.

It is well to recollect that the mere statement of phenomena is a far different thing from that wide generalization which reduces them to orderly series.

When, therefore, old experimenters and writers speak of the operation of medicines through the medium of the nerves, it is proper to inquire what they understand by this statement.

The reply of one will be, that the nerve fibre transmits the *irritation* by *direct continuity*—as Bichat and Broussais. Another, that it affects the *vital force*, under whose demon-

iac inspiration the *vital properties* of distant parts are acted upon—as Stahl and Paine. Others, receiving the excito-motory system of Hall, suppose it to call into action the muscles and muscular coats of the arteries supplying particular parts —as Todd and Bowman, Pereira, &c.

There cannot be found one, who, till the present discoveries, has ever suggested any other reflex change than motion, except where mental action is involved; and none have pointed out the excitor and reflex relations of the cerebro-spinal and ganglionic systems. Many have said, the apple falls, but it was Newton who said *why.*

Thus, the statement of operation of medicines by sympathy, as by Morgan and Addison, and a vast number of other writers, was the expression of, to them, inexplicable phenomena.

Thus, the statement of irritation of the alimentary canal and its appendages; the occurrence of "tooth rashes," &c., as incident to dentition, has been made from time immemorial; and has been made with as little reference—as in the analogous case of laughing, vomiting, or other convulsive muscular action from titillation or injury of particular points or surfaces—to any physiological law of operation.

Pereira observes:—"The arguments in favor of the sympathetic action of these agents (medicines) are *few, feeble* and of *doubtful validity.* The experiments of Dr. Blake APPEAR TO ME TO HAVE GIVEN THE *coup-de-grace* TO THE LATTER (*i. e.*, the sympathetic) HYPOTHESIS."—So much for Pereira's "explanation of the excito-secretory system applied to therapeutics."

But Pereira admits that sundry agencies—*e. g.*, electricity, heat, cold, light, mechanical irritants and corrosives—affect remote parts through the agency of the nervous system. "They act," says he, "on the principle of shock" (referring to Marshall Hall's Gulstonian Lectures in 1842,—*vide* Pereira, vol. 1, p. 162). Pereira adopted Hall's explanation of the modus, and *his only;* and this involved nothing but *motor* action. Otherwise Hall himself could base a claim to priority on the date, 1842.

Pereira himself is careful to separate the action of these agents from that of medicines proper, and compares them rather (with Liebig, whom he quotes,) to the action of red-hot iron or the knife! There is no reference by him to any physiological law of action—*he* never dreamed of it;—the phenomena he adduced were those of death and utter overthrow of physiological laws.

Todd and Bowman differed from Marshall Hall in discarding the difference between the cerebro-spinal and true spinal systems. The entire encephalic and spinal cords, with their appendages, furnish but a single system of afferent and efferent fibres, converging to a single axis of ganglia, fused by commissural fibres and conducting vesicular neuvine.

With this exception, the modus of action was precisely identical with that of Hall—continuity with the brain being necessary to mental phenomena. Their view simplifies the subject materially; but it is well to recollect that it contains not even the germ of the present doctrine.

Their view of the sympathetic functions is as follows:

"The sympathetic appears to exercise a three-fold office—first, that of a sensitive nerve to the parts to which it is distributed; secondly, that of a motor nerve for certain muscular parts; and thirdly, that of a nerve to blood-vessels. It is almost certain that blood-vessels enjoy in their coats a power of contractility; and it seems highly probable that these nerve-fibres exercise an influence *upon that contractility.* Such an influence, it is evident, would materially affect the nutrition of parts, the blood-vessels of which are subject to it; and, as secretion is mainly dependent on the normal nutrition of glands, it is reasonable to suppose that that function likewise would be to a certain extent controlled by these nerves."

It is worthy of notice that these authors do not even allude to *any* reciprocal reflex action between the cerebro-spinal and sympathetic systems, nor dwell upon any usual reflex action among its own sensitive and motor nerves. So far as this essay is concerned, they may be thrown out of the question.

The discovery of the difference in function between the anterior and posterior roots of the spinal nerves was first definitely made by Alexander Walker, in 1809. Sir Charles

Bell, who has the general credit of it, it is *more* than probable, derived the idea from Walker. But it is quite remarkable that Walker believed the anterior roots to be sensitive, and the posterior motor in function—which all know to be just the reverse of the opinion of Bell. The establishment of the diversity in function of the anterior and posterior roots is, however, really the gist of the discovery; and even now it is not certainly proven, but what Walker is right and Bell in the wrong. There are very many striking facts in favor of the position of the former; but this one thing is evident—that neither had the remotest idea of *physical* reflex actions. *Sensations* and motions were all they had in mind.

Sensations and mental emotions were the necessary precursors of any reflex actions, according to Prochaska, Bichat, Broussais and every known writer prior to Marshall Hall in 1836. Hall recognized physical reflex acts of motion, independent of sensation or mental action. When mental action or sensation were involved, he believed there were involved cerebro spinal fibres; otherwise, only true spinal fibres—but *motion* always. The modified doctrine of Todd and Bowman, which we have already given, is the one generally received. It does not conflict with, but simplifies, that of Hall.

But modern physiology must recognize something else than motion. There is a symmetry, a balance, a beautiful adjustment of the other phenomena of the system, which equally demands the systematic action of a superintending function.

Pathologists began to see that "dillatations and contractions, accelerations and retardations" were not enough to account for the remarkable phenomena of inflammation. They saw that the processes of secretion and nutrition were subject to modifications not less noticable than those of the motory apparatus. The attempt, then, was to render them subsidiary to motor action by contraction or dillatation of the blood-vessels. Or, feeling the imperfection of this mode, they cut the gordian knot by subjecting all to the domination of an abstract vital force, "analogous to the soul," and endowed with creative energy. Strange as it may appear, a

prominent medical journal (the N. Y. *Med. Gazette*) inclines to the opinion that this is the best mode of explanation—that its great defender carries too many guns for any and all antagonists! Is it not as passing strange as pitiful, that so much darkness can prevail where light can so easily be had?

On the whole, this is established:

The excitor branches of the cerebro-spinal axis, prove also excitor to the nerves of the ganglionic chain, thus modifying nutrition and secretion. This is demonstrated by Prof. Campbell, so far as human observation, experiment and reason can demonstrate any proposition.

It is a magnificent starting-point for future progression.

The writer of this article begs to add, that this is but a branch of a wider generalization, which, since 1848, he has believed the facts warranted, and which will be seen to include all the phenomena of nervous relation.

He believes, with Bacon, that whereas, while myriads of a certain class of facts can establish no law, there are certain kinds of facts, a single one of which only being known, a certain law is seen, which will include myriads of future discoveries in the world of facts. They are commanding—"prerogative."

Thus: All the active phenomena of life take place through the medium of cells. Each cell is essentially independent, save of its peculiar fluid nutriment. The assemblage of various cells in the organism renders a variety of nutriment necessary, and the nutrient fluids are so constituted that each variety is provided for, and by the circulation a proper condition of the nutrient fluid is maintained.

Altered nutrition of any single cell varies more or less the general nutrient fluid; and variation of the fluid varies more or less the actions of the single cell.

In vegetable life, the fluid or gaseous nutriment remaining ever the same, the cells are uniform in action. So far as the distinction of organs of vegetable life in the animal being holds good, so far the same equable result ensues from the pervading nutrient fluids.

But it is peculiar to animal existence that irregularities in the nutrition of particular parts should ensue. These are what distinguish animals from vegetables.

It is necessary that there should be a mechanism for bringing the physical being into relation with external forces and the high power of mind.

The facts warrant us in believing the cells of that system to be the dynamic portion, and the fibre the conducting.

By experiment and observation, we everywhere see cells modified with their fluid nutriment.

We everywhere see molecular or integral changes of the fluids change the functional operation of the cells—this element is everywhere present, whether in or out of the body. The facts warrant us in concluding this the essential element of cell modification.

Shall we suppose the nervous system to act upon the cells in any other manner? Is it philosophical to invoke a new cause when one is already known?

The resulting effect from nervous impulse ever depends upon the structure reached. No effort of will or art can produce any other than the effect for which the structure provides.

Anatomically and microscopically, the nerve-conductors have precisely the same structure—shall we assume that they are essentially diverse. unless this be necessary to the explanation of the phenomena?

The facts warrant us in saying that there is no more real distinction between sensitive and motor fibres, than between the fibres of extensor and flexor muscles—the connection is the thing.

Changes at one extremity of the nerve fibre manifest their influence at the other extremity, and the result is a modification in fluid and cells. This is the whole secret of reflex action, for the cells and fluids at the extremity secondarily influenced stand in precisely the same relation to a tertiary series.

It is unnecessary to suppose the change in the fluid to be

totally dissimilar to a chemical one—indeed, there are myriad facts which show that often this is all that is effected.

It is not contrary to analogy that nervous fibre has the power of conducting, or indicating, these delicate changes of composition at its extremities.

Again: Motion depends upon changes in the cells of muscle; it is as much an act of nutrition as that of a gland. In a large proportion (viz: voluntary) of the muscles this is effected by cerebro-spinal nerves—hence, cerebro-spinal nerves directly vary nutrition.

Sensation, likewise, depends upon changes in the cells of the part affected, or in their nutrition, and, indeed, may shade, by indefinable lines, into actual inflammation. In most cases, if not all, the nerves of sensation are cerebo-spinal. Destroy motor, or sensitive, nerves, and the parts which they modify wither; and thus of other changes in them.

But even perception and intellection are varied by changed nutrition of particular parts of the nervous centre (e. g. inflammation, various medicines, etc.), and, without lending a shadow of support to pseudo Phrenology, or cranioscopy, it is evident that increased activity of mental action modifies, and even increases the nutrition of the brain.

We might enlarge, indefinitely, but it is unnecessary, for our own views are already before the profession.

The ganglionic is not the only secretory nerve—all nerves are truly "secretory" in their effect, for they all change nutrition. All "excitor" nerves, therefore, whether their effect be experienced through the glands, or muscles, or encephalon, or whatever, are "excito-secretory."

It is to be hoped that there are few remaining in the profession, so shallow in understanding as to mistake these views for materialism.

There is, it is true, in them, no acknowledgment of a "vital force" of occult qualities—neither is there in them the frippery of "secreted" mental action.

Indeed, this is the only doctrine which can escape the charge. It renders necessary a belief in the "substantive existence of the soul." The physical changes are not ideas; the cell-power is not the mind-power.

The appreciative soul commands the material "master piece of Omnipotence" to do its bidding. From the disintegrating material mechanism, the mind collects the forms of ideas.

The ignorant looker on half believes that the delicate mechanism of the telegraph is possessed of a demoniac vitality (as Prof. Paine believes the human mechanism to be occupied by an occult familiar, "substituted for the creator and capable of annihilation;") but the true physiologist, with the true christian, sees, in its surpassing analogue, the human body, the inimitable handiwork of the Supreme Architect, and the thinking, willing, perceptive human spirit which HE has placed within it to command its operative parts, and to be impressed by its ceaseless changes whilst life shall last.

Practically, then, will two prominent results ensue from the discussion of these laws of the nervous apparatus. There will be a more rigid investigation into the remote causes of local diseases.

And, again, physicians will have enhanced confidence in the efficacy of medicines, when they sincerely believe they are treating material changes, and not merely the erratic perversities of obscure vital forces and properties.

The great length to which this paper has most undesignedly prolonged itself must bring it to an abrupt conclusion.

We cannot forbear, in closing, to urge this whole subject upon the careful attention of the profession, notwithstanding the persistent and systematic attempts of sundry *interested partisans* to prevent recognition and reception of the immensely important advances which have been made in this deeply interesting branch of physiology.

KALAMAZOO, January, 1858.

Article V.—*Tubercular Phthisis the Result of Imperfect Cell Action—Continued—With a Consideration of its Treatment, and Review of some of the different modes which have been and are now recommended.* By R. E. Haughton, M. D.

The effects of Alcohol, or any of its preparations, upon the nervous system, are now to be considered, in its relations to the treatment of tubercular disease of the lungs. We see, in all cases, an impairment of nervous power, a loss of nervous energy, and this takes place from the principle causes. One is the confinement in close rooms over heated, imperfectly ventilated, and from a knowledge that an insidious and fatal disease is fastening itself upon vital organs, this is a depressing influence, and impairs nervous powers. The second cause is a vitiated or changed condition of the blood, and spinal cord—the elements necessary to the generation of health, nervous power, and this failure grows worse, from day to day, as the powers of nutrition fail, because every organ is dependent upon healthy nutrition for the manifestation of healthy power. But some Alcoholic stimulus is recommended, and used to sustain, as they tell us, the nervous energy. Does it do it? Does it do any thing, in such a case, but injury?—Certainly not. The stimulus goes into the stomach, reaches the brain through the medium of absorption into the blood vessels, stimulates its energies for a time, poisoning its nutrition at the same time. What is the result? The stimulation passes away, and depression follows. Then the alcohol requires to be eliminated, having exerted its poisonous influence upon the brain, and it, together with the elements of waste, passes into the current of venous blood, and returns to the heart, thence to the lungs, and burned off along with the carbon and other waste products, the result of the activity of the organs. But the lungs are crippled, and do not carry on the process of respiration, hence there is an imperfect aeration of the blood, and this blood poisoned by some alcoholic stimulant, perhaps brandy, wine, ale—query—can health be

regained under this process of poisoning? Alcohol is a product of fermentation, a rotting process, and it is introduced to assist in curing a diseased or decaying lung, from morbid deposits. There is not a particle of nutrition in all that has ever been manufactured; and now we expect to derive no benefit from any agent, unless it assist the nutritive processes, or can by the agents of nutrition, be converted into fat, and thereby arrest the blood impairment, which is so marked a feature of this disease.

But it is said that the immediate effects of alcoholic liquors, is to produce a deposition of fat. This is true to a certain extent, but the result of imperfect elimination of material, which should have been consumed in the respiratry process, or thrown off by the skin, liver or kidneys. The deteriorating effect of alcohol, upon admixture with the blood, is deficiency in plasticity, the red globules diminished; and more than all this, aeration of the blood is always impeded—the liver, skin and kidneys become structurally deranged, from efforts at the elimination of a poison at which the whole economy rebels, and with one simultaneous offort endeavor to expel it from the system.

The deposits of fat, in any case, depends upon the kind of liquor used; thus, ale and beer contain saccharine matter which is either consumed in respiration, leaving the rich materials of the blood to be converted into fat, and deposited, or is itself converted into fat. But these again, it must be recollected, do not so readily stimulate as other liquors; but if the sugar they contain is the fat producing agent, let it be introduced for that purpose, in some other agent. The deposition of fat, as well as its production, in the system of a tubercular patient, is a result greatly to be desired; in fact, it is the sum total to be desired in any treatment, because if this takes place deposits cease to take place, and an arrest of the disease is the result. But fat can only be produced, as a healthy product, by and through a good condition of the nutritive functions, and we do not believe that any stimulant, in the form of alcoholic liquors, can improve the nutrition, only as a temporary

thing, which will, sooner or later, fail, and leave a depression of nutrition greater than in the beginning.

To sum up in a few words—the use of alcoholic liquors, in cases of disease of the lungs, are not warranted, and are likely to be productive of injury to the various organs of the body, ending in organic disease of the same.

We proceed now to examine the effect of Cod-Liver Oil, in tubercular disease. The basis upon which this agent was introduced, was the ease in which the system could convert it into nutrition, and, also, that it contained a sensible portion of iodine, which also would be beneficial as an alterative. But I suppose that all the iodine which it contains would never exert any remedial influence; hence the oil is continued as an element of nutrition easily converted into fat, and thereby producing the desired result. It must be admitted that cases have been benefited, or apparently so, and some, perhaps, have been cured—or at least the disease has been, for a time, arrested. But it will be found that such cases have been of that class which I have named—the accidental cases—and in which there was no original failure of the power of nutrition. It must be admitted, that where the stomach has failed entirely to digest, or change even fluid injesta, as I have often seen, it would not be likely to retain or act upon the oil, in such a way as to be beneficial. First, the smell and taste of the oil is intensely nauseous to many persons, and sickness of the stomach is prostrating, impairs the balance of nervous energy, hence is likely to do more harm than good, especially as digestion and absorption are dependent upon nervous power for proper performance. Again; where the stomach tolerates the oil, it may accomplish a good purpose, otherwise it cannot. Again; it is well known that there is deficient or arrested biliary secretions in these diseases, hence the oil cannot be absorbed so well, as a proper admixture of bile with any oleaginous portion of food, fits it for absorption. There is no digestion of oil or fats, so to speak, but an admixture of all the fluids of the digestive organs, which favors a minute division of the oily particles favorable for lacteal absorption.

From observation, I am satisfied this does not take place in those cases where failure of nutrition is the first and prominent lesion; hence, the oil fails of its desired effect. In consumption, the principal agents demanded in the system, are those of the saccharine and oleaginous group, because either are convertible into fat; and those of the saccharine group are useful in the process of combustion aud generation of animal heat, which last is an important item in the consumptive person, who is always chilly, except in heated rooms, the very place where, of all others perhaps, he ought not to be, and which are decidedly prejudical to his present and future progress towards health. Then, in the place of cod-liver oil, I would use such agent, either as food or medicine, or both, as combine these elements, viz: fat and sugar, and in none, perhaps, do we find them more palatable, or combining them in more perfect fitness, than in the rich cream of milk. Not only does it combine these elements, but, also, another, which has been shown to be of great importance, and which, in this disease, plays an important part in the morbid process which are known to take place. I refer to albumen. The cream contains the oily or fat particles, the saccharine and the albuminous element, which ought to be introduced, and a little experience has shown to me, that it is not likely to disappoint us in its use. Not only so, the patient can take it, and take it, too, with the most pleasurable feelings, and is anxious from time to time to repeat the draught. If there is an indication for means to improve the blood, and act as an alterative, there is none which is so likely to do good, as the syr. iod. ferri.—It contains an element which the blood is commonly deficient in, viz: iron—and acts as an alterative upon the liver, by virtue of the iodine it contains, and is a tonic. These are among the chief means, and fill the indications required in any case of hereditary consumption. If we would assist the digestive powers of the stomach, pepsin would be the agent I would select, as coming nearer to nature's effort, in accomplishing the desired result. Experiments of later date have tended to confirm Wasmann's inquiries in the following statement:

"In regard to the solvent power of pepsin for coagulated albumen, it was observed that a liquid which contains 17 10-100 of acetate of pepsin, and 6 drops of hydrochloric acid per ounce, possesses a very sensible solvent power, so that it will dissolve a thin slice of coagulated albumen in the course of six or eight hours. The same acid, with pepsin, dissolved blood-fibrin meat and cheese, while the isolated acid dissolved an insignificant quantity at the same temperature. These experiments, by Wasmann and others, would indicate that pepsin was a principal agent in digestion, and that when combined with hydro-chloric acid, digestion was performed out of the body."

If, then, digestion fails, introduce the agent; and Leibig taught the doctrine that nature indicated to us, the element required, and as we followed her teachings we should be faithful exponents of a successful practice. But let us introduce, pepsin in a failure of digestion, and if we find that food is more perfectly digested, and nutrition more perfectly carried on, we do a great work, and do what all our boasted remedies have failed to do in such a case. We pass over the treatment of this disease by emetics and bleeding, as relics of past days in the history of the treatment of this disease, and pass on to some which are more modern; and we look at the proposition of Prof. Green, to cure this trouble even when cavities, (vomica,) exist in the structure of the lungs. Prof. Green says he injects the solution of nitrate of silver into those cavities, thereby cures the ulceration, and promotes the cicitrization of the same, and there is a cure. But it is not quite so easy. We must recollect that while one crop of tubercles are softening and forming cavities, another crop of deposits are taking place in other portions of the structure of the lungs, and even if he succeeded in cicatrizing the first cavities, others are to be produced by the same process as the first. The only safe rule, is to change the system so the deposits do not take place; then what have been deposited may be rendered latent, or softened, and that is the end of it. He cannot do it by such means, could he introduce the remedy into these cavities, as

he says. But I remark here, it cannot be done; and even if it could, it would be eminently dangerous to the patient.

For further remarks upon this point, I refer to the report of the Committee appointed by the New York Academy of Medicine, upon the paper of Prof. Green upon the subject of Diseases of the Air Passages, and their treatment. I also refer to a paper of my own, on the Topical Treatment of the air passages, in the November number of the Medical Observer, for 1856, in which I review a little that report. The report of the Committee was divided, the majority agaist the treatment or its feasibility. A minority report rather in favor of it. I believe that the larynx may be reached and injected, but no instrument has ever passed the rima-glottidis and passed through the bronchial tubes, and injected a cavity in the lungs. For chronic laryngitis and pharyngitis, the treatment is feasible and effectual; beyond that, it is neither feasible or safe. Not only so, if the whole treatment were eminently practicable, the disease could not be cured by it, because it begins wrong—the constitutional difficulty is still in existence, and the disease progresses as before.

But now we come to the plan of cure by Inhalation. This plan of treatment is not new, by any means, but has been spoken of and used by very ancient writers. But in our country it has been built up into a system of treatment almost independent, by men who certainly have not clearly understood the pathology, in its inception of this disease. It is declared to be curative. But it is not so; it can only be palliative.—It begins at the wrong place, and does not do that which is most required by the vital actions, viz: improve nutrition, and restore the blood to a healthy condition. Until this be done, tubercular deposits will continue to take place as certainly as the sun shines, for it is governed by laws as unchangeable as those which cause the revolutions of the planets—an effect as certain to take place under certain conditions, as the cause existed. Inhalation boasts of its many and wonderful cures, but they are cures on paper. This treatment is palliative when the vapor inhaled is saturated with anodyne or

soothing remedies. It is only useless to follow this treatment, as it serves to disappoint the victim of consumption more surely, as his hopes are fictitiously elevated by reported success. If you take a genuine case of consumption, you have conditions which the inhalation of no remedy reaches—a condition of the blood deficient in iron and sulphur; and more than this, this very condition of deficient red corpuscles, because of deficiency of iron, is one which, of itself, explodes Inhalation as a system.

Now for the reason. Iron in the blood attracts and absorbs oxygen, thus in health perfecting all those important vital changes which preserve health; but, when deficient in the blood, the oxygen, though taken into the lungs, does not revivify and reanimate the vital machinery, because the agent for which it has the greatest affinity is absent, or so much deficient, that it is almost powerless. How shall we build up the blood? is the great question. We are cut off, frequently, by the condition of the stomach, from assisting nutrition in that way; where shall we begin. I propose now that a treatment by transfusion of blood, is rational, furnishes the materials, or elements, which are deficient in the blood, and furnishes all the elements which have become deficient, particularly iron. The oxygen of the air then begins to exert its transforming power, and the vital current carries more of vigor to the attenuated frame of the patient.

I propose to do this, and select, as the proper subject to furnish the blood, a young person of robust health, free from any traces of original or acquired disease, and take blood to to be transfused, either from an artery, or vein, which, in a healthy person, contain all the elements of repair, for the economy, being in its highest sense vitalized. I apprehend that a patient, thus furnished, would soon show improvement, that the digestive organs would show a greater activity, and food would be relished and digested—thus, a change would take place in the very inception and beginning of the conditions of consumption. All the secretions would be better elaborated, nervous power would improve, and we should

get an absolute change in the conditious of health, and the deposits in the lung would become latent, cavities would cicatrise, cough subside, and we should have a cure of consumption—the only kind of cure we get—if deposits have been deposited in the lungs. Such a cure is permanent, and, with care, a patient would live on till stricken down in after years with some other disease. In no case has transfusion been (to my knowledge) used, tried, or recommended, in tuberculosis, though it has been successfully tried in hemorrhagic cases, and the result has been a saving of life. In twenty-three cases of this kind, eighteen lives were saved. Death occurred in five, because the operation was too long deferred.

Dr. Polli, in Ranking's Half Yearly Abstract, volume 17, gives these cases. He says of it, "It is safe, simple, and efficacious.' He recommends it, not only in cases of excessive hemorrhage, but also in cases of extreme inanition, where there is not time to introduce food in the ordinary way, or strength to digest it. I have seen a few cases of consumption where the patient evidently died in a state of inanition, from inability of the stomach to digest, and the absorbents to appropriate the nutrition; whose lungs were not so impaired but that they might have lived months longer could they have been nourished. And we almost always have such a condition of the system of nutrition, and we want a remedy—nature's own remedy. We have it in Transfusion of Blood.

M. Trosseau (Ass. Med. Jour.), June 17, 1853, prescribes raw meat and recent blood as therapeutic agents. He speaks of *animal* blood, and attributes its good effects, principally, to the iron it contains. The Presse Medicale Belge, says that in Belgium it is a common custom, in some diseases, to drink bullocks blood in the morning before breakfast. Persons suffering from Hœmoptysis to exhaustion, rally rapidly by taking blood in the morning, before it has cooled after slaughter. It is said that children take it readily. We quote these remarks to show the influence of the remedy

when taken internally—and there is no reason to doubt it as a remedy in cases of consumption, scrofula, and other diseases where remedies may have failed to effect a cure.

Again, that others may be assured of the benefit of blood, as a remedial agent, we refer to the employment of Dr. Breslau's Extractum Carnis, in the exhaustive diseases of children—and such great benefit has been derived from it, that it is worthy of passing notice.

Dr. Mauthner recommends the Extractum Sanguinis bovis, in all the exhausting diseases of children. The mode of preparing this extract, is—fresh blood is passed through a seive and evaporated, in a water bath, to dryness, rubbing into a powder when cold. Ten to twenty grains given daily. There is then strong evidence that the elements of fresh blood, introduced into the human system, will rapidly change the play of the vital actions; and, more than this, it is nature's own remedy. Why? Because the blood is changed into healthy elements, and in this way may be speedily restored.

Let some of the institutions for the sick—some of the hospitals—make a trial of medicating the consumptive. There is as much good sense in this as in the use of Ol. Jecoris Aselli—a nauseous remedy, to say the best of it, and most commonly rejected by the stomach, or, at least, impairing the tone and power of the stomach already too weak. Some of our late journals have reported a few successful cases of transfusion in alarming hemorrhages, and, in another paper, I might show that the condition of blood in its elements, in exhausting hemorrhage, and, after them, also in Asnemia, Chlorosis, etc., as no different, essentially, from the blood of consumptives. If so, there is no reason that this mode of treatment should not be given to the poor consumptive invalid, and, perchance snatching the victim of a cruel relentless disease from his fate, and robbing the cold grave of many lovely, amiable, and beloved of our common humanity.

Some may say it cannot be done, and say who shall furnish the life-giving current to the poor sufferer. Friends are

anxious and willing—and I have been asked to do it—and many are ready to bare the arm and supply the life-giving stream.

The treatment of consumption is the opprobrium of our art, and suffering humanity demands a cure—and, let not a man, whose heart throbs in sympathy with the afflicted, reject any means, from prejudice, or preconceived notions, but come to the investigation with the feelings of a philanthropist, and accept the truth, or reject the error. The plan of transfusion is already known in other cases. Drs. Leach, Blundell, Land, Hamilton, Davis, and others, may be consulted in reference to transfusion. Ramsbotham, also, details perhaps, the readiest mode, and, in this way, it is easy, safe, and efficient.

I may remark, in conclusion, that I have a full belief in the curability of consumption—and the testimony of the profession is all that way. But, to render this disease eminently so, we must change the treatment and meet all the demands of nature, in her conflict with disease. Let the profession try it and speak out.

Bibliographical Record.

Lectures on the Diseases of Women. By CHARLES WEST, M. D, Fellow of the Royal College of Physicians; Examiner in Midwifery at the Royal College of Surgeons of England; Physician Accoucheur to St. Bartholomew's Hospital; and Physician to the Hospital for Sick Children. PART I.—Diseases of the Uterus. *Philadelphia:* BLANCHARD & LEA, 1857.

There is no class of diseases capable of awakening more intense interest in the mind of the general practitioner, than that which is commended to our notice in the volume before us.

The commanding symptoms of frequent examples of this class of diseases, being often most alarming, and often consisting in functional derangement of other important organs, thus adding complexity to urgency, the mind of the observant physician is ever on the alert to detect latent relations and sympathies. Intense interest in this class of diseases thus becomes a natural result of their treatment. The

work under notice, then, will be received with favor. Its author has possessed great advantages for observation and study of his speciality, and the present work he regards as but a "first installment towards the discharge of that debt which the opportunities of a hospital and the responsibilities of a teacher impose upon him. He promises, within the next three years, "if health and strength are spared," a second volume, devoted to "the remaining diseases of the female system." We trust that the learned and laborious author may be spared to complete his truly meritorious work.

Commencing, in the first two, with the symptoms and modes of examination of diseases of the female system, our author devotes the third, fourth and fifth lectures to the function and disorders of menstruation. Inflammation and its consequences are considered in the sixth, seventh and eighth, while misplacements of the uterus are treated in the next five lectures. Outgrowths and malignant diseases are discussed in the last seven lectures of the work. We commend the book to the consideration of all who strive to keep posted in this interesting class of diseases.

A Dictionary of Medical Science; containing a concise explanation of the various subjects and terms of Anatomy, Physiology, Pathology,' Hygiene, Therapeutics, Pharmacology, Pharmacy, Surgery, Obstetrics, Medical Jurisprudence, Dentistry, etc.; Notices of Climate and of Mineral Waters; Formulæ for Officinal, Empirical, and Dietetic Preparations, etc.; with French and other synonyms. By ROBLEY DUNGLISON, M. D., LL. D., Prof., etc. Revised and very greatly enlarged. *Philadelphia:* BLANCHARD & LEA, 1857.

While veneration for man is not a prominent trait of our character, we freely confess to a feeling of profound respect for men who accomplish great things, who leave their record upon the page of science. Such a man is the author of the work whose title we have recorded above. Did his reputation rest upon no other effort, that enviable superstructure would repose securely upon a work which ranks with Webster's, and which is a *necessity* to every medical man who has any claim to the character of a student.

In the present edition we have added about six thousand subjects and terms, making the work the most perfect Medical Dictionary in the English language. It is highly creditable to the publishers, Messrs. Blanchard & Lea, and a source of gratification to the medical public, that, notwithstanding the great increase in the size of the book, *the price is not enhanced.* We venture, in behalf of the Profession, to thank the publishers for their enterprise and liberality.

Spirit of the Medical Press.

On Hemorrhoids, and Prolapsus of the Rectum, with their Treatment, by the Application of Nitric-Acid.—By V. A. Brown, M. D., Surgeon to the Enrolled Pensioners and Volunteer Battery of Artillery, London, Canada West. Hemorrhoidal affections have been so frequently the theme of surgical enquiry, they have excited so much controversy, and called forth so many monographs from eminent members of the profession, within the last few years, that one feels no little hesitation in approaching such a subject. In a practical science like surgery, far more good is in general done by directing attention to special points, enlarging the field that has been already sown, and maturing its products, than by lending the mind exclusively to the conception and propounding of novelty.

A novel idea, being the result of deep meditation and close reasoning, may in point of utility, though replete with merit, if unaided by any light antecedently shed on the subject, be without value, while the accomplishment of the task just mentioned can hardly fail to be of practical benefit to some, and perhaps suggestive to all.

This observation applies with peculiar force to the subject of the present communication. and may be deemed a sufficient excuse for introducing one here, which to many may seem too often touched upon.

No class of affections which comes under the cognizance of the surgeon, is more distressing, or more productive of uneasiness and suffering, either to male or female, than those of the rectum, particularly if they have existed for any length of time.

On this continent hemorrhoidal affections are extremely common, to be attributed in a very great measure to the climate and our mode of life, which to a great extent tend to cause and promote torpidity of the hepatic secretions, and with it a general congestion of the whole portal system. The frequency, also, of dysenteric affections often lays their foundation and that of prolapse.

They are seldom met with in very young persons, being scarcely ever produced till the body is completely developed in breadth as well as height, an age between 30 and 40 being the most common period for them to begin.

In speaking of piles, two things very distinct in their nature, treatment and consequences, are frequently confounded with each other, namely, *hæmorrhoids* and *hæmorrhoidal excrescences.* The former are nothing but a varicose state of the veins at the verge of the anus. The veins are branches of the internal iliac; they pour their blood into the superior hemorrhoidal

vein, which returns its blood to the vena porta. If this becomes obstructed from disease or any torpidity of the liver, it would necessarily lead to congestion of the veins of the rectum; and this anatomical fact points out to us that the remedies, to effect a cure, must be directed to the relief of the loaded liver. In their texture they are subject to a great deal of variety. Sometimes, as stated above, they are merely dilated veins or varices situated near the anus, or lower portion of the rectum, forming prominences covered by its mucous membrane, or the delicate skin near the anus, and from which a bleeding takes place whenever there is a great determination of blood to the parts.

In the other still more complicated cases, viz: of hemorrhoidal excrescences, their texture is more complex, many of them being characterized by an areolar, soft, spongy structure filled with blood.

At periods when these are in a quiet state, free from irritation, and without any particular determination of blood to them, they are small and shrivelled; but in the contrary circumstances they swell, become firmer, undergo as it were a kind of erection, and blood is voided from their surface. Hence their texture is compared by French pathologists, to the erectile tissues. Numerous arterial branches are distributed to them, which have often occasioned a fatal hœmorrhage when the operation of excision is had recourse to for their removal. Hemorrhoids are divided into internal and external, according to their situation, either above the internal sphincter, near the verge of the anus, under the thin delicate integuments with which this part is covered. But as an internal pile may be protruded below the ext. sphincter, the best criterion is its texture, for it is always covered by the mucous membrane of the bowel, while an external pile is invested by the delicate skin which surrounds the verge of the anus.

Those internal ones which resemble varices, lie under the mucous membrane, which is often found adherent to ther surface, and so thin that their blue colour can be plainly distinguished through it.

Varicose piles chiefly make their appearance when the parts are in a state of congestion, in the form of dark-blue elastic knobby swellings, not attended with much pain, yielding to pressure, but returning immediately it is discontinued. In short, internal piles, according to the most recent authorities, are considered to be prolapsed folds of the mucous membrane, lining the internal sphincter, extremely vascular, hypertrophied and thickened by long constriction.

External piles have, when the skin is thin, the uniform bluish tint of a vein; while internal piles present that purplish colour which resembles the intense congestion of strangulated mucous membrane.

The former may be snipped off, and there is no danger of hœmorrhage after the vein has emptied itself; the latter, if cut away, bleed continuous-

ly and profusely, the blood being arterial and not venous. This fact leads us to a question of great practical interest, viz: ought internal piles ever to be excised? A very great variety of opinion exists upon the point. Many eminent surgeons advocate the propriety of the excision of all kinds of hemorrhoids, arguing that the ligature occasions excessive danger from phlebitis, peritonitis, pelvic abscesses; and while the advocates of the ligature contend that the fatal results of hemorrhage which has so often ensued from excision, ought to render the operation unjustifiable, it may be safely mentioned, that both operations, in the hands of the most skilful of our profession, have repeatedly proved fatal, so much so that many have discontinued both, chiefly that of excision.

Within the last few years the surgical treatment of this class of affections has undergone a great improvement, by an agent which bids fair to supersede all other mode of interference. I allude to the application of strong nitric-acid, which has proved eminently successful. Its use is greatly to be preferred either to excision or the ligature, as being less painful, very certain in its results, and free from all danger. With the timid male or female it excites no apprehension, and a second application, should it be required, is never objected to.

Its use was first introduced into the Dublin School of Surgery by M. G. Cusack, who has used it with uniform success for some years. While attending his clinique in madame Steeven's Hospital, I had numerous opportunities of witnessing the success with which he used it, and since then I have myself applied it in many cases with similar results.

Mr. Cusack was very particular in its mode of application. The best and readiest mode is by means of a small hair-brush, made expresslfy or the purpose; or if not procurable, a flat piece of wood, the size of a spatula, but a little narrower at the end, is to be wet with the strong acid, and applied decidedly over the pile till its surface becomes a grayish white. A little oil is then smeared over the part, in order to prevent any free acid affecting the neighboring parts. The chief things to be attended to, are not to take up too much of the acid on the stick, lest it drop on the surrounding parts, and to apply it effectually, so as to destroy the mucous membrane which covers the pile. When this is done, the slough caused by the acid soon comes away, leaving a healthy granulating surface, which rapidly heals, and by its contraction produces a curative pressure on the subjacent distended hemorrhoidal vessels. Frequently after its application, a dysuria comes on, which lasts some hours, sometimes days, and subsides spontaneously. There is sometimes, also, swelling, partial or general, of the arcolar tissue about the anus. The patients complain of it a little, and generally think that it is the hemorrhoids which come down.

To combat these symptoms, the patient should be confined to bed for a few days, and kept strictly on low diet, and opiates should be administer-

ed, in order to produce constipation of the bowels. Should dysuria occur, warm hot stupes to the anal region, with an opiate enema or suppository, will be found to give great relief, or the hip bath; and should there be retention of urine, which is sometimes likely to occur in consequence of sympathetic irritation, the catheter should be used. In a few days small portions of sloughs will be seen, indicating that the mortified tumours are thrown off. Then should any raw surface remain, a mild astringent lotion will rapidly effect a cure.

The following cases, selected out of many which I have treated, will show how efficacious are its effects in these troublesome affections.

Mrs. B., aged 32, mother of two children, a very delicate person, had been subject to piles for two or three years; they have been greatly increased by pregnancy. She had tried, in vain, various astringent lotions and ointments, with constitutional treatment. Latterly the parts had become slightly inflamed, and produced such local uneasiness, that she was willing to undergo any operation that would be likely to affect a radical cure; for that purpose she consulted me.

The tumours consisted of dense, elastic, knotty swellings, clustered together, of a purplish hue, hypertrophied and thickened by long constriction, and situated within the internal sphincter. Every stool caused her, she said, intense pain. It seemed a remarkably favorable case for nitric acid. I accordingly recommended its application to her, and, promising a certain cure, she readily consented.

The following day, having previously perfectly cleared out her bowels, I freely applied the acid, according to the method described above. She suffered considerably after it for several hours. The pain, however, gradually subsided, under the use of the remedies enumerated above. In five or six days the eschars came away, bearing three or four of the tumors, but greatly reduced in size. She experienced great relief, and promised to undergo a similar operation, which I told her would be necessary in order effectually to remove them—whenever I considered it the proper time. In a month afterwards, I reapplied the acid; the application being followed by similar symptoms, but this time with a complete removal of all the remaining tumours. Six months have now elapsed since the last application, and she says that she feels perfectly relieved.

In the following case, viz: one of prolapses of the rectum of more than 38 years' standing, and which, during its continuance, was painfully distressing to the subject of it, its beneficial results, although only partial, are extremely marked.

I shall give the gentleman's own history of his suffering. In the year 1819, while serving in India, I had a very severe attack of dysentery. Shortly afterwards the rectum became relaxed, and continued to do so until the year 1824, when it became a confirmed case of prolapse of the rectum;

from which time until I consulted Dr. Brown, in April, 1857, it has continued to trouble me, not only at the time of evacuation of the bowels, but when I make use of any exertion, such as rowing a boat, digging, &c., and at times when simply walking. Previously to my consulting Dr. Brown, I had repeatedly made use of various astringent applications, from none of which, although given the fairest trial, did I receive the slightest benefit.

After the first application of the acid, the prolapses did not descend except when stooling, and then but partially; and after the second application it ceased to do so altogether, unless the bowels were confined or too relaxed, and then even so slightly as to require no force beyond the contraction of the rectum to return it.

The prolapse, in this case, was of so extensive a nature that on the occasions which I use the acid, I applied it in a very small quantity. So large a portion of the mucous membrane of the rectum was included in the protrusion, that I was afraid a larger application of the escharotic would perhaps produce untoward results from inflammation and sympathetic irritation.

I purpose applying it, if necessary, two or three times again; when, judging from the very great improvement and comfort which it has afforded already, I am very sanguine of its resulting in almost a perfect cure.

On some of the Internal and other Uses of Chloroform.—By W. R. Gore, M.D., Surgeon of the City of Limerick Infirmary and District Military Prison. —During the cholera epidemic of 1854, I had considerable opportunities of administering this remedy to relieve vomiting, and as an antispasmodic and stimulant, and amongst the vast number of cases which came under my care in my public duty, it was a matter of great satisfaction to me to find that it proved itself to be a remedy of great value. Nothing so readily relieved the sickness and vomiting, the feeling of oppression, or appeared to maintain the strength of the sufferer, and, by arresting exhaustion, to prolong the time for remedial measures, or protract the fatal issue, as this remedy. I, therefore, extensively recommended its use, and had thereby additional testimony to its value. It was generally combined with ammonia, tinct. of cardamoms and capsicum, and also with laudanum. The dose, frequently repeated, was from five to eight minims. Since that time I have used it to a considerable extent in many other affections, and as, in my public capacity, I write some fifteen thousand prescriptions annually, a very ample opportunity has been afforded to me of testing the efficacy of an agent, compared with which few additions have been made to the Pharmacopœia of as great value.

Amongst the poor, chronic cough, with dyspnœa and varied forms of

dyspepsia, very much prevail. In the chronic form of bronchitis, accompanied by dyspnœa and constriction of the chest or epigastrium, I know of no remedy of equal value. I scarcely recollect a case of this description in which I have prescribed it, where it has not produced marked benefit, and for which its repitition has not been sought for with avidity. I usually combine it with tincture of squill and camphorated tincture of opium in an ordinary cough bottle. Ten ounces will contain dr.ii of each of the latter, and dr.iss to dr.ij of the chloroform. Few cases will occur without experiencing some, if not great relief; many, after a little time, have got so much better as not to require its continuance. Experience such as this has given me much faith in this addition to the ordinary medicines in such cases, and I therefore prescribe it freely, or rather generally.

In those derangements of digestion, accompanied by gastrodinia, gripings generally, flatulence, and disturbed functions of this class, I have found it most useful when added to the ordinary cardiac mixture. It is certainly a valuable adjunct in allaying abdominal pains arising from uterine, dyspeptic, and nervous derangement, unaccompanied by acute inflammation, and very much aids the effect of remedies in chronic constipation. I have had some few cases of ague, in which its administration, anticipatory of the cold fit, was accompanied by manifest benefit. In two out of three cases which occurred amongst the Royal Artillery in hospital, the fit was entirely cut short, the third case was cured after the second fit. In such cases it was combined with considerable doses of quinine, and six drop doses of Fowler's solution of arsenic.

I have had some cases of asthma which appeared to derive benefit from its use, the more especially by gentle inhalations during the severity of the spasmodic breathing, the effects of which were aided by mustard plasters to the spine.

In cases of vital prostration, I consider it one of the most valuable stimulants we possess.

It is said to be useful in sea-sickness, but I know it to be valuable in allaying the nausea, feeling of prostration, and sickness which arise in the stomach from hepatic affections and other derangements of the chylopoietic viscera, affecting, sympathetically, that organ.

In nervous palpitations and visceral debility from exhaustion of the splanchnic nerves, it is one of those remedies which, if once the sufferer uses, he will seek its repetition; so far I can speak from personal experience. Analogy suggests many forms of disease—organic or functional—where its administration ought to afford relief, and to which, no doubt, the discretion and ability of the profession will apply it. There are forms of hysterical mania, spasmodic affections, delirium tremens, hydrophobia, trismus, and other affections, where experience of the remedy may add to its usefulness, and also in typhoid prostration.

For the relief of pain *externally applied*, its combination with tincture of aconite and anodyne linament, appear its best liquid combination. Dr.ii of chloroform, dr.iv of tincture of aconite, and dr.iiss of anodyne liniment, constitute a useful formula.

It is not necessary to observe anything upon its use as a vapour douche or when inhaled to produce anæsthesia, these forms of its application are so universally known; but I hope the instances where I have found its internal use valuable, may lead to a more extensive test of its utility.—*Dublin Med. Press.*

On the Proximate Cause and Specific Remedy of Tuberculosis.—Abstract of a paper laid before the Academy of Medicine of Paris, on the 21st of July, 1857. By John Francis Churchill, M. D.—The total number of cases of phthisis treated by me amounts to thirty-five. All were in either the second or third stages of the complaint; that is, they had either softened tubercles or cavities in the lungs. Of these nine recovered completely, the physical signs of the disease disappearing altogether in eight out of that number; eleven improved considerably, and fourteen died; one still remains under treatment.

I believe that the results, of which the preceding is a summary, taken in connection with the considerations I have set forth at length in the paper now in the hands of your Hon. Secretary, will be found to justify the following conclusions:—

The proximate cause, or at all events an essential condition of the tubercular diathesis, is the decrease in the system of the phosphorus which it contains in an oxygenizable state.

The specific remedy of the disease consists in the use of a preparation of phosphorus, uniting the two conditions of being, in such a state that it may be directly assimilated, and at the same time at the lowest possible degree of oxydation.

The hypophosphites of soda and lime are the combinations which hitherto seem best to fulfill these two requisites. They may be given in doses varying from ten grains to one drachm in the twenty-four hours. The highest dose which I have been in the habit of giving to adults is twenty grains.

The effect of these salts upon the tubercular diathesis is immediate, all the general symptoms of the disease disappearing with a rapidity which is really marvellous.

If the pathological deposit produced by the dyscrasy is of recent formation, if softening has only just set in and does not proceed too rapidly, the tubercles are absorbed and disappear. When the deposit has existed for a certain time, when the softening has attained a certain degree, it sometimes continues in spite of the treatment; and the issue of the disease

then depends upon the anatomical condition of the local lesion. I have made numerous attempts to modify the local condition of the lungs by the inhalation of different substances, but have never obtained any satisfactory result independent of what was to be attributed to the specific treatment. The hypophosphites of soda and lime are certain prophylactics against tubercular disease.

The physiological effects which I have observed to be produced by the use of the hypophosphites of soda, lime, potash and ammonia, show these preparations to have a two-fold action. On the one hand, they increase the principle, whatever that may be, which constitutes nervous force; and on the other, they are the most powerful of hæmatogens, being infinitely superior to all medicines of that class hitherto known. They seem to possess in the highest degree all the therapeutical properties formerly attributed by different observers to phosphorus itself, without any of the danger which attends the use of that substance, and which has caused it to be almost forgotten as a remedial agent. The different preparations of hypophosphorous acid will undoubtedly occupy one of the most important places in the materia medica.

The Academy resolved that the paper b referred to a committee, consisting of MM. Louis, Trousseau and Bouilland.--*Dublin Hosp. Gazette, Aug.* 15, 1857.

Inutility of Depletion in Syphilitic Iritis.—Mr. Hamilton, in a clinical lecture (Dub. *Hospt. Gaz.*), condemns depletion in the syphilitic iritis. His practice is to give to grains of calomel, and one-fourth or one-eighth o. opium, three times a day, till full salivation, in sub-acute cases; and in the acute form, the same quantity every third hour. Where there are other symptoms, eruptions, etc., the mercurial action should be kept up for eight or ten weeks. When the mouth is affected the improvement begins, and rapidly progresses,

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Congenital absence of the Supra-Renal Capsules.—M. Martone addressed a description, accompanied with a drawing of a malformation which came under his observation, in which there was a fusion of both kidneys, they forming but one body, with a congenital absence of the supra-renal capsules. *Ibid.*

Editorial and Miscellany.

VERITAS ET JUSTITIA, SINE TIMORE.

THE REMOVAL QUESTION.—The *Peninsular Journal* (or at least *one* of its editors), in the January issue, defines its position on this all-important subject; and, as it takes decided ground against the removal, we propose to consider, in a spirit of the utmost candor, its several objections. We are glad that the *Journal* has at last taken position on this subject, for the known opposition of its senior editor, and the long silence of his paper, have been matters of surprise to many, who are deeply interested in the welfare of the University. We are glad, too, because, in the consideration of this question by the Board of Regents, we are not only willing, but even anxious, that all the objections to the proposed removal should be duly set forth. In reference to its silence, the *Journal* has, it says,

"been governed by a sense of respect for the Board of Regents, whose powers to do such an act we suppose to be restricted by the State constitution, and whose wisdom, we believe, would restrain them from the performance of it, if it were not illegal."

We confess that we were not aware that *respect* for the Hon. Board of Regents imposed *silence;* and we have too high respect for the gentlemen composing that body, to believe that they entertain any such view of the sentiment, or quality, under consideration. On the contrary, we believe them to be deeply interested in the discussion of all matters of educational interest.

With regard to the legal question alluded to, as eminent legal opinion as the State affords, has unequivocally expressed the legality of the removal; and it requires no great profundity in legal lore, to decide, that if the clinical branch of the Medical Department, already established in Detroit, be legal, the removal of the whole of that Department to the same locality, will involve no legal disability.

Our readers are already aware that an effort is being made to remove the Medical Department of the University of Virginia from its present location, to the city of Richmond. The *Peninsular* alludes to this fact in the following manner:

"Quite recently an effort has been renewed, which once proved abortive, to remove the Medical Department of the University of

Virginia, which is situated at Charlottsville, to the city of Richmond, for the reasons given by those in this State who wish to disturb the status of our own University, the parties to which, however, not being liable to the same presumption of pecuniary attaint."

The insinuation that we wish to "disturb the *status* of our own University," and "that pecuniary attaint" attaches to our efforts in behalf of removal, we dismiss as entirely unworthy of a notice in an article dispassionately discussing a principle of educational policy.

The Medical Faculty of the University of Virginia is composed of only three Professors, who, being in the enjoyment of a salary of three thousand dollars each, devote their whole time to teaching, striving to make their school pre-eminent as a *preparatory* institution. Ambitious of this distinction only, they of course oppose the removal, and one of their number advocates his views in an able article published in a late number of the *Virginia Medical and Surgical Journal.* This article, the *Peninsular* republishes entire, and thus speaks of it:

"The writer expresses, so beautifully, opinions we have long entertained, on the subject of country medical schools, and of the place they should occupy in a general system, that we gladly avail ourselves of this occasion and this mode to repeat them."

It seems, then, that the *Peninsular* is ambitious of making the University of Michigan, simply a *preparatory* school! That this, is the inevitable conclusion, will be seen from the following quotation from the article, which the *Peninsular* so cheerfully and fully endorses:

"It is freely admitted, however, that the education of a medical student cannot be completed at the University. An immense majority of the members of the medical class attend one course of lectures without graduating, and then matriculate for a second term in some of the city schools. Even the few graduates never think of passing at once into the practice of their profession, but always visit some of the larger cities, in order to prosecute clinical studies for a greater or less length of time."

This, then, according to the *Peninsular*, is to be the great result of *free education* in the University of Michigan! A *preparatory* school!! the students of which must *leave the State* to seek the means of completing a *practical* education! or else, a full corps of clinical Professors must be salaried in Detroit, at a large additional expense, and the candidates for graduation be required to leave the preparatory school at Ann Arbor, and resort, for an additional

period, to Detroit, to complete their education. This, too, when by transference of the whole Department, a complete, practical education could be furnished by the same expenditure of the University fund that is required to carry on the preparatory school at Ann Arbor. Is this economy? Is it wisdom? Is the profession—are the people of Michigan satisfied with such a result in the State educational enterprise? With the ability to afford a perfect education in *practical* medicine, and with the resulting ability to establish such a standard of educational acquirement as would place the Medical Department in advance of every school in the country, are we prepared to sit down and quietly content ourselves with the rank and position of a *preparatory* school? *We* are earnestly opposed to such a Rip Van Winkle line of policy. The Profession moves ever onward—let us at least move with it. We again quote:

"We propose on some immediately future occasion to show some of the evils which are inherent to the custom of turning "first course" students into the wards of a hospital, as well as the fact that the whole business of clinical instruction, in the United States, is placed upon a false basis—that adopted by the University of Michigan excepted—amounting, in cases that might be specified, to an unmitigated "sham," as asserted by another writer in the Old Dominion."

Our readers are aware that *we* have never proposed the introduction of first course students to the hospital course. On the contrary, we have urged that the *last* year of pupilage should be zealously devoted to clinical medicine, surgery and obstetrics; and that this course should be made a *requisite for graduation.* With regard to the clinical portion of the Medical Department of our University, *as at present organized*, forming an exception to the general rule laid down in the above quotation, a sense of truth compels us to say that it is the greatest "sham" of all. A *single* professor teaching clinical medicine, surgery, and obstetrics, in a *two-months'* course! It is in sorrow that we make the statement, and it is due to the Medical Faculty to say that the course does not meet the approval of a majority of that body. We cast no reflection on the acting-Professor engaged in the course. We cheerfully express the belief that he has given his whole energies to the work in which he engaged; but the course, as established, is utterly inadequate. *A two-months' course, with a single professor!* And this is the *exception* to the general rule—"that the whole business of clinical instruction in the

United States is placed upon a false basis"!! Such claims for such advantages, make us the laughing stock of medical educators. If we can do no better in the way of clinical instruction, pray let us not resort to *boasting* to make up the deficiency.

To show how utterly inadequate is the present clinical course, we extract from the *Peninsular* a statement of the requirements made by the various licensing boards of Great Britain, which was evidently compiled by another of the editorial corps of that journal, who, it is surmised, does not exactly coincide with his colleague in the removal question:

"The Edinburgh University, for the degree of M. D., requires *three months* attendance upon lectures on clinical surgery, *six months* upon lectures upon clinical medicine, and *twelve months* attendance in the wards of the Medical Hospital.

The University of Glasgow, for the same degree, requires *twenty-four months* attendance upon a medical hospital, *twenty-four months* upon lectures on clinical medicine, and the same amount of time devoted to attendance upon a surgical hospital, and upon lectures on clinical surgery.

The University of Aberdeen requires *six months* attendance upon lectures on clinical medicine, *three months* clinical surgery, *twenty-four months* in a medical hospital, and the same time in a surgical hospital.

The University of St. Andrews requires *six months* attendance of lectures on clinical medicine, and the same on clinical surgery, and *twenty-four months* attendance in a medical, and the same in a surgical hospital.

The London University requires, for its full medical degree, that the candidate should have attended *twelve months* on each of the four courses of clinical instruction, viz.: clinical medicine, clinical surgery, medical hospital, and surgical hospital.

The Dublin University requires, for the lowest degree of M. B., *nine months* attendance upon clinical medicine; and for the surgical diploma, *twenty-seven months* upon each of the courses, medical hospital, clinical medicine, surgical hospital and clinical hospital.

The Queen's University, of Ireland, requires, for the first degree, *six months* attendance upon each of the above courses; and for the second degree, *eighteen months* in each of the two hospitals, and the same length of time on clinical surgery.

The Royal College of Physicians, London, requires *thirty-six months* attendance upon lectures in clinical medicine, and the same length of time in a medical hospital.

The King and Queen's College of Physicians, Ireland, requires attendance upon clinical medicine and a medical hospital, each *six months*, and upon clinical surgery and a surgical hospital, each *twenty-four months.*

The Royal College of Surgeons, Edinburgh, requires attendance upon clinical medicine and clinical surgery, each *six months*, and the two hospitals each *twenty-one months.*

The Faculty of Physicians and Surgeons, of Glasgow, requires the same.

The Royal College of Surgeons, London, requires *nine months* in clinical medicine, *twenty-seven* in clinical surgery, attendance of *one winter* and *one summer* in a medical hospital, and *three winters* and *two summers* in a surgical hospital.

The Royal College of Surgeons, Dublin, requires attendance on each of the four courses of clinical instruction before named, *twenty-seven months.*

The Apothecaries' Hall, England, requires *nine months* of clinical medicine, and *eighteen months* in a medical hospital.

The Apothecaries' Hall, Ireland, requires *eighteen months* attendance upon each of the four courses.

The Army Medical Board requires, of clinical medicine and clinical surgery, each *eight months*, and attendance upon each of the hospitals *eighteen months.*

The Navy Medical Board requires the same attendance of *eighteen months* in each of the hospitals, and *six months* attendance upon each of the courses of clinical lectures.

The East India Company Medical Service requires *six months* attendance upon lectures in clinical medicine.

By this statement it will be seen that clinical instruction is regarded so essential in Great Britain, that not a single institution grants a diploma to a candidate who has not availed himself of such advantages. The American Medical Association, which may be regarded as the authorized exponent of the professional sentiment of this country, has repeatedly urged the importance of making such instruction necessary to graduation among us, but as yet, with very partial success."

From the *American Medical Monthly*, we extract the following statement of what was done in the way of clinical instruction in the Bellevue Hospital, New York, during the month of November; and when it is remembered that this is a sample of what is being done there during the winter, it will be seen that the attractions of hospitals are *real*, even though "placed upon a false basis."

"Drs. Clark, Metcalf, and McCready, have lectured in the medical wards upon the various diseases there present. Dr. Barker has visited the lying-in wards, lecturing there, and also at the Pathological Hall, upon the puerperal state, commencing his course upon the state of the mother immediately after delivery, or the conditions peculiar to the post-partum state. Dr. Elliot's lectures were upon operative midwifery, with illustrations with the subject, at the Pathological Hall. Dr. Woods' lectures have been upon diseases of the breast, and 'diseases of the testes.'"

Thus it will be seen that no less than six gentlemen have been engaged in clinical teaching in Bellevue Hospital, or, in the estimation of some Old Dominion and Peninsular writers, enacting a "sham"!

In conclusion, we must express the belief that the demands of the medical public, the keenly felt wants of the medical student, economy in the expenditure of the University fund, and the glory of the University as a whole, all point to the removal of the *whole* of the Medical Department to the locality of its clinical branch, to the end that the latter may be fully developed without additional cost, and free medical education in the University of Michigan, fulfil its high and glorious destiny. G.

Close of the Volume—The Future.—With the present number closes the Third Volume of the *Medical Independent.* During our connection with the journal, as previously, the *Independent* has been entirely free from the bias and restraints of *organship.* It has been free to praise and advocate, and not fearful to condemn. It has been bound up in the interests of no single set or faction of the profession. It has been an advocate of the Medical Department of the State University, but has hesitated not to point out its defects and urge reform. It has offered to the Profession a large amount of original thought and observation, and has thus been a medium of communication between its members. Medical Science and policy, and the advancement of medical organizations, have been objects of its sincere devotion. But, while it has been thus devoted, it has endeavored to avoid that blindness which too often constitutes the chief evidence of adherence. It has endeavored, also, to strengthen and substantiate the good, and to point out, correct, and improve, whatever existed of an opposite or defective nature.

In giving such a character to the *Independent*, its editors have hoped to win the confidence, and command the support of a Profession which they were striving to serve, and of which they were proud to rank themselves *working* members; and they have experienced the satisfaction to be derived from a constantly increasing support. We are conscious of having accomplished good; we have worked for the welfare and general harmony of the Profession; and the latter considerations have induced us, with the commencement of another vol., to consolidate with the *Peninsular Journal of Medicine*, under the name of *The Peninsular and Independent Medical Journal.*

The consolidated Journal will be brought out, and carried on, under the editorial management of Prof. Palmer, Mr. Frederick Stearns, and ourself. Prof. Palmer and ourself represent the old journals. Mr. Stearns is a highly accomplished and practical pharmaceutist, and will develop a pharmaceutical feature in the journal which will prove of great value to that portion of our subscribers, who, from location, are obliged to compound and dispense their own medicines.

The consolidated journal will appear on the first of April, and will endeavor to retain all the good qualities of the two, from which it derives its existence. Its character and tone will be independent of, and free from all bias, whether of faction or location. It will strive to be worthy of the Profession, and will be open for the dispassionate and courteous discussion of all questions of medical science and policy. Untrammelled by the cramping and spirit-crushing influence of organship, its whole energies will be devoted to the advancement of Medicine as a Science and a Profession. G.

Our Editorial Exit.—Two years have now elapsed since we issued the first number of the "*Medical Independent*," and having become convinced that the main object for which it was originated, viz: the establishment of an independent and unbiassed journal, and assured that the interests of the whole profession can be best promoted by a consolidation with our cotemporary—the "*Peninsular*," which consolidation having been accomplished, it only remains for us to offer, in a few words, our benediction. We have no desire to review in detail the history of the *Independent* up to the present time. Its position, its objects and aims, are familiar to our readers. Its existence seemed to us a necessity, and as there would be little progress in this world without *change*, so another metamorphosis in medical literature has occurred, which seems to us also a necessity.

The combination of the two, upon a liberal and comprehensive basis, renders two medical journals, and the efforts of six editors, no longer necessary. Hence, three of the editors of the "*Peninsular*" have consented to withdraw, and entrust their interests to one of their associates—Dr. Palmer. On the other hand, we have cheerfully consented to withdraw from the "*Independent*," and trust its interests to our *tried* friend and associate—Dr. Gunn.

In the hands of these gentlemen, aided by one of our most accomplished collaborators—Mr. Frederick Stearns—the Profession have

the earnest of a journal worthy of high rank in the medical literature of this country. We have ample assuarnce that it will still be an *independent* journal, and embued with the spirit of progress—the organ of no elique, faction or school.

This is all we ean ask, and if such it proves to be, we have no doubt it will receive the cordial support and eo-operation of every medical man who desires to store his memory with new and practical truths.

Our editorial experience has eontributed largely to our pleasure, and, in many ways, we hope, not a little to our profit. Like most other relations in life, it has presented its "lights and its shadows." The former we shall cherish among the pleasant keepsakes of memory; the latter will find their place among the "bye-gones."

Those who have been our friends, and have contributed so liberally to our encouragement and support, have our sincere thanks and the assurance of a grateful remembrance.

To our readers, all, we earnestly commend the new Journal; and trust that a new zeal will inspire and prompt every member of the profession, in our State, to arouse latent energies, exhume buried talents, and labor, with united effort, for the promotion of our professional interests and the advancement of Medical Science.

L. G. ROBINSON.

The Annual Meeting of the State Medical Society was held, pursuant to adjournment, at Detroit, on the 20th of January, 1858. The country was but very slightly represented. We regret that such was the fact. Still, those present manifested an increased interest in the success of the Society, and from this we anticipate a better representation another year. We condense the proceedings from the minutes of the Secretary.

The President, Dr. N. B. Stebbins, took the chair; Dr. E. P. Christian, Secretary.

The minutes of the previous meeting were read and approved, after which the election of new members was proceeded with.

Drs. E. M. Clark, E. Kane, Detroit; E. Leach, Owosso; C. Gilbert, Lyons; J. G. Bugbee, Edwardsburgh; A. E. Leete, Romeo, were elected members of the Society.

The election of officers was then made the special order of business, to take place after the delivery of the President's address.

The Secretary read a communication from the Indiana State Medical Association.

On motion, the communication was referred to a committee of three, for an investigation and report. Drs. Palmer, Sager, and Beech, were appointed such committee.

Dr. Beech offered the following resolution:

Resolved, That it is, in the sense of this Society, becoming annually more incumbent upon the officers of the Medical Department of the University of Michigan. to investigate closely the character of mind, and the preliminary education of candidates for membership in the medical classes.

Dr. Christian offered, as an amendment, the following addition to the resolution:

And, That the members of this Society, and the profession generally, be recommended to investigate closely the character and preliminary education of candidates for admission to their offices.

A discussion, in regard to the merits of the resolutions, occupied the remainder of the forenoon. The Society adjourned at twelve o'clock, without action.

Afternoon Session.—The Society was called to order and the minutes of the morning session read and approved.

The President, Dr. Stebbins, read an Address on the subject of "Medicine an Inductive Science, and Hippocrates the Father of Inductive Science."

The address being concluded, Dr. Gorton offered the following resolution:

Resolved, That the thanks of this Society be tendered to the President for his able address; and that a copy be requested for publication.

The resolution was adopted unanimously.

Dr. P. A. Knight was elected to membership.

On motion of Dr. Gorton, the Convention proceeded to ballot for officers for the ensuing year. Drs. Brown and Brodie were appointed tellers by the President.

An informal ballot was taken for President, which resulted in the choice of J. Adams Allen. The total number of votes cast, on the formal ballot, was twenty-seven—of which Dr. Allen received sixteen, and Dr. Patterson, ten; scattering, one.

A ballot was then taken for the election of a Vice President, the result of which was the election of Dr. J. A. Brown, to that office. The whole number of votes cast on the formal ballot, was twenty-three—of which Dr. Brown received fourteen, and Dr. E. M. Clark, nine.

Dr. E. P. Christian was elected Secretary for the ensuing year, by a *viva voce* vote.

Dr. Klein was elected Treasurer by a *viva voce* vote.

On motion of Dr. Beech, the thanks of the Society were tendered to the retiring President, for the able and efficient manner in which he has performed his duties during the past year.

The newly elected President being absent, Dr. Brown, the Vice President, took the chair.

Dr. Gorton offered the following resolution:

Resolved, That a committee of three be appointed, by the chair, to report, at the next annual meeting of this Society, on the proper means to be used to legalize the procuring of subjects, under certain restrictions, for the study of anatomy.

The resolution was adopted, and the President appointed Drs. Gorton, Kane, and Ashley, such committee.

The resolution of Dr. Beech, offered in the morning, was taken under consideration.

Dr. Beech desired to amend the resolution by erasing the words "the Medical Department."

Dr. Batwell offered the following resolution as a substitute:

Resolved, That this Society respectfully but earnestly recommend to the Regents of the University the necessity of a preliminary examination in the elementary sciences, in the cases of those students who present themselves for admission to the Medical Department of the State University.

Dr. Brodie moved indefinite postponement.

Dr. Pitcher said that the Faculty had the authority to make the examinations, and were supposed to do their duty. He supported Dr. Brodie's motion to lay on the table.

Dr. Palmer understood that the Faculty had no power to exclude any person from the privileges of the institution.

Dr. Palmer's resolution, and Dr. Christian's amendment, were adopted as separate resolutions.

The Society then adjourned until seven o'clock P. M.

Evening Session.—The Society was called to order at seven o'clock P. M., and minutes of afternoon session read and corrected.

Reports of committees being called for, Dr. Palmer, chairman of committee appointed to report in regard to the circular of Indiana State Medical Society, asking co-operation in interchange of published transactions, reported that the committee were unable to recommend any definite action until something was determined by the Society in regard to the publication of its transactions; that they would favor any such interchange if the transactions were published; they recommended that the paper be received and placed on file, for further action.

The report was adopted.

Dr. Sager, appointed at the last meeting to report on puerperal diseases, reported that his paper was unfinished, but would soon be completed, and would be subject to the action of the Society. Dr. Sager was requested to finish his paper and refer to Committee on Publication.

Dr. Gunn presented a paper, written by Dr. Dubois, on rheumatism. It was referred to the Committee on Publication.

Dr. Sager presented a paper, written by Dr. Corbin, on diseases and topography of Livingston county. Referred to the Committee on Publication.

Dr. Davenport, appointed to report on the diseases and topography of Wayne county, was unprepared to report.

Dr. Axford read an able and interesting report on the subject of vaccinnation, which was referred to the Committee on Publication, and the thanks of the Society returned for the same.

Dr. Christian presented the report of Dr. W. W. Hippolite, on "Zymotic Poisons of Michigan;" which was, on motion, referred to the Committee on Publication.

Dr. Palmer, appointed to report on the diseases of children, read a highly interesting paper, entitled "The great importance and urgent duty of especially studying the diseases of children."

Dr. Beech, of Coldwater, gave a synopsis of his paper, which was a voluntary communication on the diseases of Coldwater, Michigan. The paper was referred to the Committee on Publication.

On motion of Dr. Beech. Coldwater was designated as the place of holding the next biennial meeting of the Society.

On motion of Dr. Brodie, the Treasurer was instructed to pay

the expenses of the Convention out of the funds remaining in his hands.

Dr. Robinson offered the following resolution as an amendment to Section VIII. of the Constitution:

Resolved, That the President be empowered to appoint, annually, a committee of three, whose duty it shall be to examine the credentials of candidates for admission to membership to this Society.

The resolution was adopted.

On motion of Dr. Cowan, the publication of the proceedings of the Society, in pamphlet form, was postponed until the next meeting.

Dr. Bugbee moved that the proceedings of the Society be published in the two Medical Journals, and that the money now in the treasury be devoted to that purpose.

The resolution was adopted.

The President appointed Drs. Sager, Clark, and Gilbert, a publishing committee.

The following gentlemen were appointed delegates to the National Medical Association, at Washington: Drs. C. M. Stockwell, P. Klein, L. Davenport, H. P. Cobb, J. C. Gorton, E. M. Clark, E. Kane, J. A. Brown, J. A. Allen, J. H. Beech, H. Taylor, J. Paddack.

On motion, the President was empowered to appoint substitutes, upon request of a delegate.

The following physicians were appointed to report at the next meeting:

Dr. A. B. Palmer, on the diseases of children.

Dr. S. M. Axford, on vaccination.

Dr. L. Davenport, on diseases and topography of Wayne county.

Dr. W. Cowan, on health of towns in relation to sanitary measures.

Dr. M. Gunn, on ununited fractures.

Dr. E. M. Clark, on plastic operations.

Dr. E. Lauderdale, on adulterated articles of diet.

Dr. E. Kane, on modus operandi and therapeutical applications of quinine.

Dr. P. A. Knight, on diseases and topography of Macomb county.

Dr. E. Leach, on diseases and topography of Shiawassee county.

Dr. N. B. Stebbins, on registration.

Dr. E. P. Christian, on criminal abortions.

Dr. L. G. Robinson, on new remedies.

There being no further business for transaction, the Society adjourned until the next annual meeting, which is to be held at Lansing, on the third Wednesday of January, 1849.

Dr. E. Brown-Sequard's Journal of Human and Animal Physiology.—It gives us great pleasure to announce the expected appearance of the above Periodical, to be published quarterly in Paris, under the Editorial care of so distinguished a physiologist as M. Brown-Sequard. We are confident that it cannot but meet with the general and warm support of all intelligent medical men among us. We have not space to insert the whole of the prospectus before us. The intended periodical had its origin, the Editor tells us, in the fact that no similar work is at present published in France, and that there is a generally-felt need of some special publication which will keep naturalists and physicians *au courant* of all the principal original works of French physiologists, and give a *resume* of the progress and revolutions accomplished in every country, which change so constantly the features of science. M. Brown-Sequard will be assisted by Doctors Ch. Robin, Ch. Rouget, and Tholozan, whose personal relations with most of the physiologists of the age, in Europe and America, will enable them very readily to procure all important publications connected with human and comparative physiology.

"We are happy to announce," he says, "that we can rely upon the collaboration of most French physiologists, and many distinguished German, English and American ones, and we believe, in consequence, that we can honestly promise that every number of this Journal will be exceedingly rich in original memoirs.

"Authors wishing to publish their essays in this Journal will be allowed the most unlimited freedom of scientific discussion, but the *Redacteur en chef* feels it his duty to declare beforehand that the object of the publication is the advancement of science, and personal polemics will be absolutely and always excluded.

"This Journal will have for its object, in addition to pure Physiology—

"1. Organic Chemistry, Hygiene, Toxicology, and Medical Jurisprudence, in their relations with Physiology.

"2. Descriptive and Comparative Anatomy, Teratology, Normal and Pathological Histology, in so far as they illustrate Physiology.

"3. The application of Physiology to the Practice of Medicine, Surgery and Obstetrics.

"It will appear quarterly, on the first of January, April, July, and October, respectively. Each number will contain from 160 to 200 pages, with engraved plates and figures interspersed in the text.

"The arrangement of the matter will be as follows:

"1. Original Essays, occupying more than half of each number.

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"Mr. Pennington, of Philadelphia, is the agent for the United States."—*Charleston Med. Journal.*

Dr. Radclffe had a great objection to paying his bills. A pavior, after long and fruitless attempts to get his account settled, caught Dr. R. just getting out of his chariot, at his own door, in Bloomsbury Square, and demanded the liquidation of his debt. "Why, you rascal," said the doctor, "do you pretend to be paid for such a piece of work? Why, you have spoiled my pavement, and then covered it over with earth to hide your bad work." "Doctor," said the pavior, "mine is not the only bad work the earth hides." "You dog, you," said Radcliffe, "are you a wit? You must be poor—come in, and you shall be paid."

Dr. R., who was attending the lady of Lord Chief Justice Holt, with a diligence remarkable for one of his situation as a physician, was asked, by one of his intimate friends, the cause of it. "Why," said the doctor, "to be sure, I have brought her through a very obstinate disorder, though I have no particular regard for the woman; but, I know that her husband hates her, and, therefore, I wish to plague him."

Contemporaneously with Radcliffe, lived a Dr. Case, a celebrated quack, a native of Lyme Regis, in Dorsetshire. This empiric was famous for his astrological acquirements, and was looked upon as the successor of Lilly, whose magical utensils he possessed. He is said to have got more for the following distich, placed over his door, than Dryden did for all his poetry.

"Within this place
Lives Doctor Case."

And he was doubtless well paid for composing the couplet which he affixed to his pill boxes:

"Here's fourteen pills for thirteen pence.
Enough for any man's own conscience."

Dr. Radcliffe met this doctor at a tavern, when the following conversation took place: "Here, brother Case, I drink to all the fools, your patients." "Thank ye," quoth Case, "let me have all the fools, and you are welcome to the rest."—*Physic and Physicians.*

"Still Harping on My Daughter."—Our venerable friend of the *Peninsular* still continues to be distressed by what he styles our infidelity to the University, arising out of a non-residence at the seat of the institution. In the current number of his journal, he makes a lugubrious effort to show that we are infidel, and, consequently (wonderful logic!), that he was not the aggressor in the present controversy. To the readers of both journals, this will be simply amusing. A single point, only, in his article, requires notice; it is as follows:

"* * * the public and repeated declaration of the Professor that he would 'break down the Clinical School," together with his publication of an apochryphal history of the acts of the Clinical Instructor, were the immediate occasions of my remarks respecting the 'fidelity' of the Professor to the University."

The charge that we have threatened to "break down the Clinical School"—emanate from whatever source it may—is simply *false.* We have regretted the inadequateness of the clinical course, and have earnestly urged its extension and amplification; but we have never, either publicly or privately, said anything that could be construed into such a threat. If we had, a charge of infidelity would not have been based upon a *non-residence.*

As to having published "an apochryphal history of the acts of the Clinical Instructor," we have never published any history whatever, of his acts. We appeal to the record. Such, then, is the nature of the "immediate occasions" of the attack upon us. Surely, our venerable friend is remarkably unfortunate in his insinuations and charges. Thus far, all have been "baseless as the fabric of a vision."

G.

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